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SUBSTRATUM INFLUENCE ON (RIG-VEDIC) SANSKRIT?[1]

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0.1: As is well known, the South Asian subcontinent today constitutes one of the paradigm cases of linguistic convergence: Three major linguistic families of distinct origins (Dravidian, Indo-Aryan, and Munda), as well as at least one language isolate (Burushaski) have merged into a sprachbund which further extends into the fringes of the neighboring Iranian and Tibeto-Burman language families. This sprachbund is characterized by an impressive array of shared features which are found throughout most or all of the individual subdialects of the area and which include a contrast between dental and retroflex segments, a prevailing SOV sentence structure, and the phenomenon of a 'cumulative' extended sentence structure characterized by the tendency to limit the occurence of finite verbs to the rightmost clause, while all preceding (non-relative) clauses have the verb appear as a non-finite 'absolutive'. Recent discussions of these and other phenomena may be found in Emeneau 1956, 1965, Gumperz & Wilson 1971, Masica 1974, Ramanujan & Masica 1969. Compare also vol. 3 of the International Journal of Dravidian Linguistics, pp. 1-230, with a rich cumulative bibliography on pp. 231-45.

0.2: Considering the massiveness of this present-day convergence, it is only natural to assume that it must be the result of centuries, if not of millenia, of quite intimate bilingual contact. And it is equally natural to speculate on the period when the developments leading to this convergence must have begun. In terms of the history of Indo-Aryan, did they begin at the time of the earliest extant texts, the Vedic saṃhitās, especially the oldest among them, the Rig-Veda? Or did they take their course only in a later, post-Vedic period?

In addition, it is natural to speculate on the direction of the convergence in its early stages. Was it a mutual convergence, as it is usually encountered in present-day India (cf. e.g. Gumperz & Wilson 1971) ? Or was it mainly a unidirectional convergence comparable, say, to that between Czech and German?

0.3: There is a vast amount and variety of literature addressing itself to these questions. As early as 1833, Pott considered the dental/retroflex contrast of Sanskrit at least partly due to the influence of the

'autochthonous' languages (78),[2] later specifying these as Drāvidian (1836: 19, 453). In 1856, Caldwell made similar claims (38). As time progressed, the number of linguists subscribing to this view and adding other features of (Rig-)Vedic or post-Vedic Sanskrit considered the result of Dravidian influence steadily increased.

In 1921, Przyluski added another possible source for some of these phenomena, namely Munda. Lévi (1923) added further weight to the assumption that Munda at one time must have been very influential in the South Asian area. As a consequence, it was for some time considered possible that Munda, as well as Dravidian, may have contributed to the specifically "Indian" features of Sanskrit (such as the dental/retroflex contrast); cf. e.g. Bloch 1934:53-4. As a matter of fact, Pizzagalli (1929:165-7) believed that only the Munda languages could be the source for Indo-Aryan retroflexion. In the more recent literature, however, the influence of Munda is considered to have been minimal at best, Dravidian being cited as the only probable source language; cf. e.g. Emeneau 1956, 1962a, 1974, Kuiper 1967a.

0.4: There is thus a long tradition of explicitly or implicitly answering the question concerning the beginning of the South Asian convergence to have been pre-Vedic (since the dental/retroflex contrast occurs already in the earliest, Rig-Vedic texts). Moreover, at least for the early, Vedic period, there is a tacit agreement that the convergence was unidirectional, from Dravidian (or Munda) to Sanskrit. At any rate, except perhaps for the area of vocabulary, no attempt seems to have been made to identify any instances of early convergence in the opposite direction.

0.5: This view, however, has not remained unchallenged. There has been a small, but constant flow of linguistic opinion according to which, especially in view of our present ignorance about the full linguistic panorama of early India, it is hazardous to attribute convergence only to a Dravidian (and/or Munda) substratum: There may have been other languages which could have been the source for at least some of the phenomena. (Cf. e.g. Bloch 1929:731-2, 1934:322-4, Mayrhofer 1953:233-4, Thieme 1955:436-48.[3]) In light of the fact that even today we find the isolated Burushaski in the South Asian sprachbund, this cautionary attitude seems to be justified.

Some linguists even have completely rejected the hypotheses advocating early substratum influence, and have claimed that the developments in ques-

tion can be accounted for as native, without any need for assuming an outside, non-Indo-Aryan substratum; cf. e.g. Bühler 1864, Bloch 1925:16, 29.

Finally, other linguists, accepting the view that (some of) the phenomena in question can be accounted for as regular, native developments, proposed that at most, the substratum language(s) accelerated or 'helped' these developments; cf. e.g. Konow 1903:455, 1906:279, Bloch 1929:723-4, 1934:53-4 (thus changing his earlier, 1925 view), Burrow 1955:95-6.

0.6: The purpose of the present paper is to critically examine the evidence and the major arguments brought forth in favor of these conflicting views. Specifically, it will be concerned with determining whether the hypothesis can be considered acceptable that the South Asian convergence began, in a unidirectional fashion, as early as pre-Rig-Vedic. In view of our present state of ignorance about (alternative possibilities within) the full linguistic panorama of early India, it will be held that this hypothesis can be considered acceptable only if it can be shown to be established beyond a reasonable doubt.

1: FEATURES ATTRIBUTED TO (EARLY) CONVERGENCE

1.1: Vocabulary: Evidence for both Dravidian and Munda borrowings has been frequently adduced. Cf. e.g. the lists in Kuiper 1948, 1955, Burrow 1955:378-9 (Munda) and 380-6 (Dravidian), Thumb-Hauschild 1958:122-4.

The evidence for Dravidian borrowings is especially prominent in later Sanskrit; cf. e.g. Class. Skt. mīna- 'fish'. It is generally admitted to be rather limited in the Rig-Veda, which offers ulūkhala- 'mortar', kuṇḍa- 'pitcher', mayūrī- 'peahen'.

On the other hand, the evidence for Munda borrowings seems to be more prominent in Rig-Vedic, where forms like lāṅgala- 'plough', as well as personal names like Śámbara- (passim), according to Mayrhofer (1951:58-9) the perhaps most important [human] opponent of Indra, Árbuda (7x), Sṛbinda- (8:32:2) can be found. (The ratio between Rig-Vedic Munda and Dravidian borrowings listed in Kuiper 1955 is, roughly, 2 : 1.)

One pervasive difficulty with these lexical borrowings, however, is the fact noted by Kuiper (1948:8-9 and esp. 1955:139) that there seems to have been a good deal of lexical borrowing also between Munda and Dravidian, making it 'nearly impossible to decide, on the evidence now available, whether [many individual words] originate in Munda, or in Dravidian ...' Thus, while

ulūkhala- is by some attributed to Dravidian (cf. Burrow 1955:380), others consider it Munda (cf. Kuiper 1955, where Dravidian origin is considered no more doubtful). However, these uncertainties of attribution are not considered serious enough to preclude the conclusion that there is evidence, as early as Rig-Vedic, for both Dravidian and Munda borrowings.

1.2: Retroflexion: As stated earlier, there is a long tradition of considering the dental/retroflex contrast of Sanskrit (cf. vit 'knowledge' vs. viṭ 'clan') the result of substratum influence. In those cases where it is possible to account for retroflexion in terms of regular phonetic developments (cf. 4.3.1 and 4.3.4 below), to be sure, some linguists have maintained that the influence of the substratum may have acted only as an accelerating catalyst. However, there are in Sanskrit many instances where instead of an expected regular dental we find a retroflex; cf. RV aṭati 'wanders' vs. later aṭati (id.). Such instances of "sporadic" or "spontaneous" retroflexion can be found as early as Rig-Vedic; cf. RV sthūṇa- 'pillar' vs. OPers. stūnā-, Av. stunā-. It is evidence of this sort which is considered most probative; cf. 2.2.1 below. (For retroflexion in general, cf. e.g. Bailey 1961, 1963, Bhat 1973, Bloch 1934, Emeneau 1954:283, 1974:92-3, Konow 1903:455, 1906:279, Kuiper 1967a:91 (with 1967b), Lewy 1913:116-7, Southworth 1971:261, Thumb-Hauschild 1958:123.)

1.3: Absolutives: Beside the "Indo-European" type of construction yat kuṇḍam akarod (sg. 3 impf.) devadatto 'pibat 'when he (had) made the pitcher, D. drank', Sanskrit also offers constructions of the type kuṇḍam kṛtvā (abs.) devadatto 'pibat 'having made the pitcher, D. drank', where the absolutive is non-finite and bears no overt syntactic relationship to any other constituent of the sentence. Especially in later Sanskrit, extended syntactic structures may offer chain-like series of reduced clauses with absolutives, and a finite verb occurring only in the rightmost clause. This type of construction is generally considered the result of Dravidian, more rarely of Munda influence; cf. e.g. Bloch 1929:733-5, Master 1930:105, Thumb-Hauschild 1958:124, Kuiper 1967a:95-7.

1.4: Participles as finite verbs: In the history of Sanskrit, we find an increasing use of (past) participial expressions (usually with omitted copula) instead of the "normal", "Indo-European" finite (past-tense) verbs; cf. "IE" devadattaḥ kuṇḍam akarot vs. participial devadattena kuṇḍam kṛtam (asti) 'D. made a pitcher'. (This development is traced very carefully in

Bloch 1906.) Especially in earlier discussions, this development has been attributed to Dravidian influence; cf. e.g. Konow 1903:456-7, Lewy 1913:116-7, as well as the more recent Thumb-Hauschild 1958:129.

1.5: Nominal style: In addition to the device of using absolutives or participles, (post-RV) Sanskrit eliminates finite verbs (and reduces clauses) also by means of nominal syntax, as in gataye (sg. D of abstr. noun gati- 'going') 'for, to going' = 'in order to go; so that I (etc.) may go'. This is often combined with a high degree of compounding, eliminating inflectional endings on all but a few nouns per clause (and virtually eliminating finite verbs); cf. vidarbha-nagara-gati-sambhavā-icchan (sg. N m.) 'desiring possibility (of) going (to) city (of Vidarbha' = 'he desires to go to the city of Vidarbha'. Compounds of this sort can grow to extreme lengths (approaching 30 members or more) in the later language. This increasing tendency toward nominal style has been attributed to (Dravidian) substratum influence, especially in earlier discussions; cf. e.g. Lewy 1913:116-7, Master 1930:105, Thumb-Hauschild 1958:108, 124.

1.6: SOV: The fact that in Sanskrit the order Subject-Object-Verb is much more firmly entrenched than in the more western IE languages, combined with the New Indo-Aryan prevalence of that order, has led especially more recent investigators to the assumption that this "Indian" feature is the result of a (Dravidian) substratum; c.f. e.g. Friedrich 1973 and In Press, Miller 1975. Masica (1974) argues, mainly on modern evidence, for a more general Indo-Altaic sprachbund.

1.7: Quotative iti: The preference of Sanskrit not to subordinate (indirect) discourse, but to have direct discourse, marked off by the (usually postposed) particle iti (originally 'thus') has been attributed to a Dravidian substratum. (Examples of this use of iti are found already in the Rig-Veda, as in yá índrāya sunávāma íti āha (4:25:4) 'who says "we will press for Indra" (unquote)'.) Cf. Bloch 1934:325-8 (with some apparent hesitations) and especially Kuiper 1967a:91-5. Mayrhofer (1953:355) considered this feature to have originated in a pre-Indo-Aryan and pre-Dravidian substratum.

1.8: āmreḍita-compounds: The distributive use of repetitions (āmreḍita-compounds), as in svaṃ svaṃ caritraṃ śikṣeran 'they should learn every one his own duty', has occasionally been claimed to be the result of sub-

stratum influence; cf. e.g. Bloch 1929:733-5, 1934:328, Thumb-Hauschild 1958:124.

1.9: api: One of the newest additions to the phenomena claimed to result from Dravidian influence is the multiplicity of functions of the (inherited) particle api. In addition to being a preverb (its inherited function), the word is also used to mean (1) 'also', (2) 'and' (especially when combined with ca 'and'), (3) concessive 'even' (with or without yadi 'if'), (4) 'totality (vel sim.)' after numerals or quantifiers (as in dvāv api 'two altogether', sarve 'pi 'all (altogether)'), (5) '-(so)ever' after interrogatives (as in ko 'pi 'who(so)ever'). Cf. Emeneau 1974:93-111.

1.10 Caste terminology and usage: The other recent addition of Emeneau's (1974:111-28) is the post-Vedic pattern of making derived feminines from masculine caste names to denote the wife of the masculine term (as in kumbhakārī- 'wife of a kumbhakāra- "potter"', kṣatriyā- 'wife of a kṣatriya') and the quasi-pronominal usage of these terms (as in kṣatriye (sg. Voc.) 'O Kṣ.', addressed by a male kṣatriya to his wife).

2: ARGUMENTS FOR NON-INDO-EUROPEAN, SUBSTRATUM ORIGIN OF THE FEATURES

2.1: As regards vocabulary, it is of course relatively easy to argue for non-native origin in the case of words which cannot be traced to PIE or Proto-Indo-Iranian sources. The only major difficulty is that mentioned in section 1.1 above, namely that it is often uncertain whether Dravidian or Munda should be considered the donor for a given word.[5]

Vocabulary correspondences of this sort, however, merely establish evidence for contact. They do not by themselves prove convergence (nor does their absence necessarily disprove possible convergence). Still, evidence of this sort is important in prehistoric arguments, since one should presumably be able to demonstrate that two languages considered to have undergone convergence were in fact in contact.

2.2: What has generally been considered proof for convergence is the argument that the features listed in section 1 above are (a) innovations of Sanskrit and (b) inherited in Dravidian (or Munda). In addition, the general, though often implicit, argument is that the features in question are alien to Indo-European.

While at one time, both Dravidian and Munda were considered possible

sources for at least some of these features, the tendency now is to consider only Dravidian a possible source. In the following I will briefly summarize the individual arguments in favor of this latter, more up-to-date position.

2.2.1: Retroflexion: While Proto-Dravidian had a contrast between dental and retroflex (as well as, in some series, a third, alveolar articulation), Proto-Munda appears to have had a system in which a voiceless dental stop corresponds to a voiced alveolar stop, with voicing being the basic, distinctive feature (i.e. [t̆] : [d] like [p] : [b] etc.). Cf. e.g. Bhat 1973: 32 and Zvelebil 1968:252 for Dravidian and Bhat 1973:33, Zide 1969:423 for Munda. On the other hand, retroflexion is an innovation in Indo-Aryan (and some of the neighboring East Iranian dialects). Moreover, it is frequently argued that retroflexion is an un-IE feature, occurring rarely, if ever, in the other IE languages. This position has perhaps been most strongly argued by Bhat (1973) who claims that all instances of retroflexion in the non-Indian IE languages for which he had data (Swedish, Norwegian, Faroese, Breton, and English) may be due to contact with the Uralic languages (40-1) and that moreover, retroflexion, since it introduces a new feature, can never come about by normal, native developments, but is either inherited from a protolanguage or due to contact with a neighboring language (in which it may be inherited or due to contact) (41-2).

Especially the non-regular, "spontaneous" retroflexes of Sanskrit can be taken as evidence for substratum influence; cf. Emeneau 1974:92-3. Thus, even if allowances are made for a 'native' development of regular retroflexion, there would still remain some evidence for convergence.[6]

2.2.2: Similarly, the use of absolutives is considered an inherited feature in Dravidian, but an innovation in Indo-Aryan, as well as in Munda. Cf. especially Kuiper 1967a:95-7 who argues that in Dravidian only absolutive constructions are possible for subordinate clauses, while in Munda, the northern languages have constructions morphologically different from those of the southern languages, with no such constructions attested in the non-Indian Austro-Asiatic languages.

2.2.3: Kuiper (ibid.91-4) offers a similar argument for considering the use of (postposed) quotative particles inherited in Dravidian, which permits only direct discourse, 'followed by a word which means "having said",

e.g. Tamil enru ..' On the other hand, only some of the Munda languages have quotative particles which, moreover, dialectally disagree in structure and formation. As for Indo-Iranian, Iranian only shows uiti 'thus' + verb of speaking (SAY) either preposed or inserted into the direct discourse, but not postposed. In addition, already Rig-Vedic offers instances of clearly quotative iti without accompanying SAY. These facts, in his view, show that postposed quotative iti is a substratum-induced innovation.

2.2.4: Similar arguments for SOV as being the result of Dravidian influence are found in Friedrich In Press. Cf. also Masica 1974 who argues for a larger, Indo-Altaic sprachbund and who adds the specific argument that the SVO of modern Kashmiri may possibly be an archaic relic (174), while--one infers--the Sanskrit SOV would be substratum-induced.

2.2.5: api: According to Emeneau (1974:111), 'None of the Sanskrit structure [of api] is inherited straightforwardly from Indo-European, or even from Indo-Iranian.' Moreover, since usages (4) and (5) (cf. 1.9 above) are not found before the Classical period, we must here be dealing with an 'innovatory development within the history of Indo-Aryan.' On the other hand, as he convincingly demonstrates (104-10), in Dravidian a postpositive particle *-um can be reconstructed for the proto-language, with all the five meanings of Skt. api.

2.2.6: Emeneau (ibid.111-28) advances a parallel argument for Dravidian origin of the feature of special caste terminology and usage. In his view, this pattern must be indigenous to India, since the caste system is indigenous. Moreover, this pattern does not emerge before the post-Vedic period, indicating an innovation. As for Dravidian, he does however admit one difficulty: The feature under discussion, to the extent that it is found in 'the Central Dravidian material from the backwoods areas of Central India, where the aboriginal social structure is tribal', rather than caste-oriented, is Indo-Aryan, not Dravidian in nature. Still, he considers it most probable that the feature did emanate from the sociologically more advanced Dravidians living 'in the riverine plains of North India ...'

2.2.7: The distributive use of āmreḍita-compounds, as well as the tendencies toward using participles as finite verbs and toward nominal style are now not normally cited as Dravidian in origin; but cf. Thumb-Hauschild 1958:124 where the former two features are, presumably on the basis of similar arguments, claimed to be attributable only to Dravidian, while the latter

is considered derivable either from Munda or from Dravidian. Lewy (1913: 116-7) more explicitly considered the use of participles as finite verbs modeled on the essentially participial nature of the Dravidian verb, while nominal style, with its sharp reduction in nominal inflection, in his view mirrors the frequent Dravidian use of uninflected nominal stems.

2.2.8: The balance of the arguments discussed in 2.2.1-7 thus is clearly in favor of Dravidian, not Munda origin for the Sanskrit features in question.

2.3: Corroborating evidence for the view that Sanskrit was--and could be--influenced by Dravidian at a very early time is often considered to lie in the fact that, though most of the attested Dravidian languages are spoken in the south, with some located in the relic areas of the Central Highlands, one language--Brahui--is found in the northwest of the subcontinent, in Baluchistan, i.e. in an area close to that first occupied by the Indo-Aryans. Cf. e.g. Southworth (1971:256-7) who, referring to Dyen 1956, claims that lexicostatistic evidence shows that this northerly position must be old. The relative 'continuity in dominant physical type on the subcontinent from the stone age up to the present day' in his view further shows that the whole area, from Brahui to the Southern Dravidian languages, once was solidly Dravidian and that today's vast intervening stretches of Indo-Aryan are the result of an absorption, not a replacement, of the native Dravidian population by the Indo-Aryans. This, of course, would make Dravidian substratum influence on (early) Indo-Aryan eminently possible.

2.4: It is further often assumed that Dravidian must have been the language of the Indus Valley Civilization which is generally thought to have flourished from 2500 to 1500 B.C. and which is frequently believed to have been destroyed by the invading Indo-Aryans; cf. e.g. Southworth ibid. The best arguments for considering the Indo-Aryans the destroyers of the Indus Valley Civilization have been summarized by Burrow (1975): The Vedic war god Indra is known as purandara- 'destroyer of cities'; Agni, the fire god, is also prominently mentioned in the Rig-Veda in this connection, 'understandably, since many of the Indus cities appear to have been destroyed by fire'; finally, there are numerous Vedic references to an indigenous population, the Dāsas or Dasyus, 'and to the occupation of their land and the capture of their possessions' (25). The view that these Dāsas or Dasyus more likely were Dravidians than Mundas was supported by Kuiper (1955:139-40)

with the argument that 'higher civilizations of Austro-Asiatic peoples seem only to have arisen under foreign influence.'

2.5: Any argument for Dravidian origin of a given feature which is based on considering that feature inherited in Dravidian but innovated in Indo-Aryan presupposes the--usually only implicit--assumption that the dialectal dissolution of Proto-Dravidian had taken place before the arrival of the Indo-Aryans. Otherwise, the possibility cannot be excluded that the convergence took place in the opposite direction, that Indo-Aryan innovations penetrated Proto-Dravidian, and that this accounts for the 'inherited' appearance of the feature in the Dravidian languages. The fact that Andronov (1963) determined, on the basis of glottochronology, that the split between (the ancestor of) Telugu and (that of) Brahui took place ca. 4100 B.C., i.e. some 2600 years before the earliest normally admitted arrival date of the Indo-Aryans, would seem to provide some explicit foundation for this assumption.

2.6: There is, finally, some more tangible, direct evidence for Dravidian influence on Indo-Aryan in late Vedic and especially in classical times. This evidence, however, is limited to the south of India which even today is Dravidian. In this area we find both evidence for simple substratum influence on Sanskrit, such as the change of Skt. l to ḷ (cf. Wackernagel 1896: 256, Caland 1906:302-3), as well as more general syntactic features which violate the rules of Sanskrit (cf. Caland 1926) and downright code mixing and code switching (cf. Wackernagel 1896:lv, Mayrhofer 1953:231-2).

3: CRITIQUE OF THE PRO-DRAVIDIAN ARGUMENTS

3.1: Although in the area of vocabulary there is ample evidence for Dravidian borrowings in post-(Rig-)Vedic (but cf. also further below), for the early, Rig-Vedic period the evidence is far from overwhelming.

Of the 77 items listed in Burrow 1955:378-86, only 12 occur in the Rig-Veda. Of these, 8 occur in the notoriously late first and tenth books (úlapa- 'shrub', ulúkhala- 'mortar', kāṭuka- 'sharp', kúṭa- 'hole', khála- 'threshing floor', píṇḍa- 'lump', bíla- 'hole', mayūrī- 'peahen'). Also daṇḍá- 'stick' (7:83:6) occurs in a late hymn. Only three occur elsewhere, namely kuṇḍá- (in kuṇḍapāyya- (8:17:13), a proper name of Indo-Aryan compound structure), paṇ- 'bargain, wager' (if in paṇí- (passim) 'merchant; miser; anti-Aryan'), bála- 'strength' (passim).[7]

More importantly, Thieme (1955:436-48) expressed to my mind justified doubts about many of the allegedly Dravidian etymologies.

In the first place, he pointed out that there is ample evidence that the Sanskrit tradition was so puristic that even non-Sanskrit Indo-Aryan words were considered mleccha- 'barbaric' and thus to be avoided. Moreover, the early Sanskrit grammarians, while making reference to other Indo-Aryan or even Iranian dialects, make no mention at all of any Dravidian dialects. In addition, many of the allegedly Dravidian words can be accounted for in terms of Indo-European or native Indo-Aryan etymologies. Cf. e.g. ulūkhala- which occurs in a 'hymn designated for recitation at a simple ceremony', in domestic ritual, 'in the presence of the wife'. Thieme proposed to therefore consider the word a non-educated, woman's-language word (with "popular" l for "hieratic" r[8]), corresponding to an educated, and completely native, *urū-khara- 'having a broad khara- "stomping ground"'. For other words, like mayūrī- 'peahen' (from mayūra- 'peacock'), Thieme thought that they may well not be native Indo-Aryan in origin, since e.g. peacocks are not found in pre-Indian IE territories and since the final -ūra- recurs in other etymologically opaque forms, such as masūra-'lentil'. While words of this type thus may be borrowings, one cannot be certain that they must be from Dravidian. Conclusive proof for such an assumption would in Thieme's view have to consist in showing e.g. that (a) there was a Proto-Dravidian form mayūra- (vel sim.) meaning 'peacock' and (b) that this form consisted of meaningful Dravidian elements or that, at least, its component parts (such as -ūra-) recur in a morphologically meaningful way in other, clearly native Dravidian words. Without such proof, the possibility cannot be excluded that Dravidian cognates like Tam. mayil are loans from Sanskrit (or another Indo-Aryan dialect). -- What is interesting in this respect is that Bailey later showed that there is a cognate of mayūra- in the Middle Iranian dialect of Saka, namely mur-āsa- 'peacock', which 'is not a recent borrowing from Sanskrit' and whose phonological relationship to Skt. mayūra- follows a highly archaic, Proto-Indo-Iranian (or even PIE) pattern (1975:59). This might well suggest that the word for 'peacock' was borrowed into Indo-Iranian prior to the Indo-Aryan arrival in India and that the Dravidian cognates are in fact borrowings from Indo-Aryan.

While there is thus no evidence for 'etymologizability' (within Dravidian) of the alleged Rig-Vedic Dravidian borrowings, at least one of the Rig-Vedic words considered a Munda borrowing, lāṅgala- 'plough' (4:57:4, a hymn of the middle period), is 'etymologizable' within Munda: Its cognates in the later Sanskrit and Pāli borrowings hala- and na-ṅ-gala-, as well as its Munda (Santali na-hel) and non-Indian (!) Austro-Asiatic cognates (Khmer a-ṅ-kāl, Malay te-ṅ-gala) exhibit typical Austro-Asiatic morphology and morphophonology, namely varying prefixes and/or variation between prenasalized and simple root-initial segments; cf. e.g. Mayrhofer 1953:239-42, 1963: 10-11.[9] In addition, already Lévi (1923) showed that many of the non-Indo-Aryan tribal names mentioned in Sanskrit, including Rig-Vedic, correspond in

a systematic fashion to other tribal names from which they differ only in terms of their prefixes; cf. e.g. (post-RV) Pulinda- : Kulinda-, Kosala- : Tosala-, Aṅga- : Vaṅga- [cf. RV vaṅgṛda- (?) (1:53:8), the name of a "demon", i.e. of an enemy of the Aryans and their gods]. As Lévi pointed out, the formational process differentiating these pairs is unknown in IE and in Dravidian, but is native to (Austro-Asiatic) Munda. According to Lévi, it is even possible to give Austro-Asiatic etymologies for many of these names. What is especially interesting in the present context is the fact that geographically, these tribal names form a chain extending from the eastern border of Kashmir to the Central Mountains where even today, Munda-speaking tribes can be found.

Add to this the fact mentioned in 1.1 above, that the Rig-Vedic Munda forms include personal names, including that of Śámbara, the perhaps most important human opponent of Indra (and his Aryan followers), and the case seems to be overwhelmingly in favor of early contact between Munda and Indo-Aryan; cf. e.g. Mayrhofer 1951:58-9. On the other hand, the apparent absence of 'etymologizable' vocabulary (and names) of Dravidian origin casts considerable doubt on the assumption of early Dravidian/Indo-Aryan contact.

Even for the later, Classical period, Bloch (1929) made the intriguing suggestion that the Dravidian words of that period may have been 'imported into classical Sanskrit by individual literary men' who may have been from the Deccan. 'What leads me to suspect that some of the words found in classical Sanskrit may be considered as provincialisms, rather than as real borrowings is this: some of the most characteristic borrowings ... are missing in the [modern] vernaculars.' Cf. nīra- 'water', toya- (id.), mīna- 'fish', eḍaka- 'ram', heramba- 'buffalo' which have all 'disappeared, if they ever did really exist.' Except for eḷaka- 'ram', they are not even found in Pāli; and Hindi has reflexes only of the corresponding Indo-Aryan words: pānī 'water', machlī 'fish', meṛhā 'ram', bhĕs 'buffalo'.[9a] If Bloch is correct, we may well be dealing with further instances of the regionally limited, and relatively late Dravidian influence on Sanskrit noted in 2.6 above.

3.2: The evidence just presented additionally casts doubt on the claim that the northwest, the area first settled by the Indo-Aryans and, as we have just seen, previously apparently settled by Mundas, was Dravidian territory and that the present-day location of Brahui is a relic position.

As a matter of fact, as early as 1925, Bloch suggested that Brahui may possibly have (re-)migrated to the northwest from an area further south. He noted in this context that Brahui is closely related to the more southerly dialects of Kurukh and Malto. (Cf. also Bloch 1929:731 with additional argu-

ments.) Moreover, as Emeneau (1962b:62-70) showed, Brahui, together with its Central Indian relatives, Kurukh and Malto, does not form the most archaic, relic-like offshoot of Dravidian (which rather is to be found in the Kui/Kwi subfamily).[10] Even for the more southerly Kurukh and Malto, Bloch (1946: xxviii) suggested that they are 'new arrivals' in Central India, that they are native to the more southern Karnatak, 'and some of their villages have Munda names.'

Finally, Dyen's (1956:625) lexicostatistic evaluation of the status of Brahui does not, as Southworth claimed (cf. 2.3 above), necessarily support an original northern position for the language: '... there is a choice whether Brahui was separated from the other languages by the Indo-Aryan invasion or whether it represents a migration. Since a negative migration cannot be ruled out, the two inferences are equally probable.' (Among historians, there is at least one seriously considered theory according to which the Dravidians may have settled (by sea) directly in South India, at roughly the same time as the Indo-Aryans arrived (by land) in the northwest; cf. Nilakanta Sastri 1966:48-65.)

3.3: It is further questionable whether the Indo-Aryans destroyed the Indus Valley Civilization:

The archaeological evidence now available indicates that 'there was an appreciable time lag between the end of the Indus civilization' and the next chronological layer, the "Cemetery H" people (whose alleged identity with the Indo-Aryans is still a matter of controversy, if not doubt) and that moreover there is no basis for the belief that the Civilization came to a violent end; cf. Lal 1975:19. As for the Vedic references to the pūr's of the Dāsas or Dasyus (and to Indra as the puraṃdara-), the pūr's seem to have been simple wattle palisades (cf. most recently Schneider 1971:3,14), and the Dāsas or Dasyus were most likely an Iranian (!) tribe whose name is etymologizable within Indo-Iranian from the word dasa- (RV 1x), Ir. daha- whose original meaning was 'man, male person' (cf. Bailey 1959:107-15).

3.4: Nor is it certain that Proto-Dravidian must have antedated the arrival of the Indo-Aryans.

In the first instance, the findings of Bergsland & Vogt (1962) cast considerable doubt on the reliability of the glottochronological method on the basis of which Andronov (1963) reached his conclusions. Further, as I hope to have shown elsewhere (In Press:§3.2), the very theory of glottochronology is doubtful, because it rests on a dubious analogy. Finally, McAlpin (1975: 114) justly criticized Andronov's paper by pointing out that since all the Northern Dravidian languages (and many of the Central languages, as well) 'are swamped with Indo-Aryan (or Iranian) loanwords and structures ... (a) fixed rate of replacement does not hold' for these languages. He further states that in his view 'the separation of Elamite and Dravidian [cf. 3.7.2 below] seems to be of the same order of magnitude as that of English and Swedish.' But he adds that 'any such dating attempts are really premature.'

3.5: The evidence so far examined thus strongly favors Munda as the language of first contact for the "invading" Indo-Aryans. At the same time, it casts considerable doubt on the theory that Dravidian was the language of first contact. As a consequence, it becomes difficult to consider as established any hypothesis which attributes to Dravidian influence any of the features found already in Rig-Vedic, viz. retroflexion, absolutives, the use of participles as finite verbs, SOV, quotative iti, and some of the uses of api.

On the other hand, for the reasons given in 2.2.1 above, it would be difficult to account for retroflexion as due to Munda influence.

However, a case could be made for Munda as (one of) the source(s) for "spontaneous" retroflexion. Emeneau (1974:93) has attributed this feature to 'Mistakes [made by native speakers of Dravidian] in the assignment of Sanskrit pure dentals to their own retroflexes'. While it is difficult to see how native speakers of languages with a dental/retroflex contrast would mistake anyone's pure dentals as retroflexes, the converse is quite conceivable, namely that speakers of a language (such as Munda) which does not have such a contrast might make mistakes in trying to speak a language which has it.[12] This would of course presuppose that Sanskrit already had a (natively developed) dental/retroflex contrast.

3.6: There is in addition reason to doubt the claim that, if the features under discussion are in fact due to substratum influence, they can be explained only in terms of Dravidian sources. At least for some of the features, there are, a priori at least, other possible sources.

One possibility would be to assume a pre-Dravidian, pre-Indo-Aryan substratum from which both language groups could have acquired the features in which they agree. Thus, Mayrhofer (1953:233-6) attributed the use of absolutives and quotative iti to such a substratum. One might even toy with the idea of attributing all of the features to such a substratum. However, in the absence of any evidence for contact with such a substratum, any such theory has to remain mere speculation.

A more attractive alternative source would be Uralic which, on the evidence of vocabulary correspondences, is known to have had early contacts with Indo-Iranian; cf. e.g. Jacobsohn 1922. If it were to be assumed that this contact took place mainly with the Indo-Aryan and Eastern Iranian subbranches of the family, one might try to account for the retroflexion found in these dialects, as well as the absolutives and the prevailing SOV order, as the result of Uralic influence.[13] For at least according to some linguists, Uralic had retroflex consonants (assibilated stops, perhaps also l and n); cf. Collinder 1960:51,68,73. Further, absolutives are found in many of the Uralic languages (Collinder 1957:38,210,and passim) and the syntactic phenomenon of 'various constructions with verb nouns' in the place of "IE" dependent clauses has been reconstructed for Proto-Uralic (cf. Collinder 1965:64);

and OV order is considered the usual order of Uralic (ibid.62).

However, the case for Uralic retroflexion is controversial; cf. the probably justified doubts in Raun 1971:39-42. Moreover, absolutives are found also in Chinese, Japanese, Korean, Altaic (cf. Emeneau 1956:9), as well as in Tibetan (Jacobi 1897:96-7), making it virtually impossible to pinpoint a particular language as the source for this feature. Similarly, as Masica (1974) has shown, SOV is found in a large area which, in addition to Dravidian (and other South Asian languages) and many of the modern Uralic languages, also prominently includes Altaic.

As for the (postposed) quotative marker, we find this feature not only in Dravidian, but also in the possibly related (cf. 3.7.2 below) Elamite (cf. Kuiper apud McAlpin 1975:111), as well as in Tibetan (Goldstein & Kashi 1973:114-5), Burmese (Okell 1969:119 and 150-1). Moreover, quotative particles--which, as in Dravidian and those Munda languages which have them, seem to be derived from the verb SAY--can also be found in non-Indian (!) Austro-Asiatic langugages; cf. Mon mɛkɛ̀h (postposed), related to kɛ̀h 'say' (Shorto 1962:77 and 171); Nicobarese ṅə̂ʔ(h) (pre- or postposed) [related to aṅahʔə 'said' (?)] (Braine 1970:230); Cambodian thaa (preposed), lit. 'to say', direct and indirect discourse marker (Ehrman & Sos 1972:29-30). These extra-Indian attestations of quotative particles cast doubt on Kuiper's argument that in those Munda languages where it is found, the quotative is an innovation modeled on the Dravidian quotative; it is now quite possible that the quotative pattern (even if not all of its lexical realizations) is native also to Austro-Asiatic and thus to Munda.

There are thus, at least for the features of retroflexion, the absolutive, participles as finite verbs, SOV, and the quotative, numerous other possible sources, beside the Dravidian one usually recognized. Also in this regard, it thus becomes hazardous to take Dravidian origin for granted.

3.7: In recent years, the question of possible outside relationships of Dravidian has been taken up again. And because of the excellent progress made in working out the internal relationships of Dravidian and in reconstructing the vocabulary and grammar of the proto-language, the recent attempts to answer this question appear more acceptable than earlier ones, although the proposals so far made still arouse some controversy (cf. the spirited debate apud McAlpin 1975).

Two such connections have been made, one with Uralic (cf. Tyler 1968) and the other with Elamite (cf. MacAlpin 1974, 1975). In addition, McAlpin (1975:114) has raised the possibility of closing this triangle, by showing also a Uralo-Elamite relationship.[14]

3.7.1: After briefly outlining the general structural agreements between Uralic and Dravidian, including the fact that 'Negation is expressible by an auxiliary negative verb ...', and after indicating that there is phonological agreement in a number of nominal and verbal affixes, Tyler went on

to give a list of 153 etyma showing systematically recurring phonological similarities and differences. More than 50% of these seem to be basic vocabulary, including body parts and kinship terms. Moreover, about 50% (not necessarily identical with the 50% just mentioned) seem to belong to the vocabulary most easily establishable as cognate and inherited within the Uralic family. As Tyler no doubt correctly argued, such a massive agreement, especially in basic vocabulary, makes anything but genetic relationship highly improbable. Unfortunately, Tyler did not try to reconstruct at least part of the proto-system in terms of which these similarities might be accounted for in a systematic fashion. However, even barring this ultimate proof of genetic relationship (given a broad enough data basis), his argument could be strengthened by pointing out not only that both Dravidian and Uralic (can) express negation by a finite negative auxiliary verb, but that at least one of these negative auxiliaries exhibits a systematic phonological matching between the two language groups, viz. Ur. äl- : Drav. al(l)- (cf. Tyler 1968:801 and 804). Considering that finite-verb negation (as distinct from negation-through-particle) is by no means a common phenomenon, the phonological agreement between Uralic and Dravidian in this respect would seem to constitute the type of shared morphological (or syntactic) anomaly which Meillet (1925:27) justly considered most probative in establishing genetic relationship. That is, the conclusion is virtually inescapable that the two language groups are related.

Under these circumstances, the fact that the correspondences between Uralic and Dravidian include sets like the following

Ur. -γ-	:	Drav. {-r- / -ṟ- / -r̲-}
-δ-	:	{-t- / -ṯ-}
-t-	:	{-t- / -ṯ- / -nr̲-}

where in medial environment, Dravidian always has at least two sets (dental and retroflex) corresponding to a single (usually dental) set of Uralic, takes on special significance. For though it is possible that Dravidian here preserves an ancient distinction which was lost in Uralic, there is another, perhaps preferable conclusion, namely that Uralic is archaic in this respect and that it is Dravidian which exhibits an innovation, a split of what originally was a single set. Such an assumption, even if not amenable to proof at this point, at least would account for the defective distribution of the Dravidian retroflex segments which, as is known, do not occur in ini-

tial environment.

3.7.2: This view tends to be corroborated by McAlpin's work. After a general comparison of the morphological and syntactic similarities between Dravidian and Elamite, McAlpin (1974) showed that the defective distribution of Dravidian retroflex and alveolar stops (which do not occur initially) is accounted for by the fact that the comparative Elamo-Dravidian evidence indicates that Dravidian ṯ and ṉ are in many cases derived from rt and rn clusters (which remained in Elamite). In addition, a dark ɨ of the protolanguage turns into Dravidian retroflex ḷ. There are, moreover, other sources for Dravidian retroflexes: Both t and l change to ṯ and ḷ between a front vowel and a following vowel.

Unlike Tyler, McAlpin does offer reconstructions and, as the preceding paragraph has shown, establishes the sound changes which relate the reconstructed forms to the attested forms. However, the cognates upon which the reconstructions are based are somewhat sparse: There are only 57 (or 60) such cognates. At the same time, however, these do include basic vocabulary (such as 'help', 'this', 'thou', 'you'). In addition, while his 1974 paper contained little in terms of a comparative morphology and no evidence documenting a shared morphological aberrancy, his 1975 paper does offer the beginnings of a comparative verb morphology. While, as the discussion following his 1975 paper shows, McAlpin's Elamo-Dravidian hypothesis has not yet met with universal approval, the direction his work has taken up to this point--from "mere" vocabulary-based comparison and reconstruction (on a limited data base) to more probative morphological reconstruction--seems to my mind promising and shows that his claims must be taken seriously.

What is interesting in the present context is that McAlpin's work clearly states what, on the basis of Tyler's evidence, could only be suggested, namely that the Dravidian retroflex/dental (or retroflex/dental/alveolar) contrast is just as much an innovation as that of Indo-Aryan. Moreover, while the Dravidian development of rt, rn to ṯ, ṉ is quite a natural one (cf. 4.3.6 below), the development of dentals to retroflex in intervocalic environment cannot easily be accounted for as natural, a fact which may be taken to suggest that, like Indo-Aryan, also Dravidian had some "sporadic" developments of retroflex segments.

Thus, even if there is as yet no universal acceptance of Tyler's and McAlpin's hypotheses, it must be concluded that the (mere) possibility that they are on the right track casts doubt on the traditional claim that the retroflex/dental contrast is an innovation only in Indo-Aryan and not in Dravidian.

3.8: Finally, as pointed out already by Bloch (1925:5), the distributional patterns of retroflexion in Sanskrit and Dravidian are quite different: Sanskrit has (rare) initial retroflexion--Dravidian does not; Dravidian has final retroflexion--Sanskrit does not; Sanskrit has a retro-

flex sibilant--Dravidian does not.[15] This discrepancy does not seem to be well accounted for by a theory which attributes retroflexion to convergence (in either direction, one should perhaps add).[16]

4: CRITIQUE OF THE ANTI-INDO-EUROPEAN ARGUMENTS[17]

4.1: As indicated earlier, the arguments for substratum origin of the features participles as finite verbs, nominal style, and distributive use of āmredita-compounds are not usually included any more in the more recent literature. They can therefore be quickly dispensed with:

Already Geiger (1893:1-5) showed that the replacement of finite past tenses by past-participial constructions is a phenomenon not limited to Indo-Aryan, but found also in Middle Persian, as well as in Kafiri. (For other (Indo-)Iranian dialects, cf. Morgenstierne 1958:163,165-6.) Meillet (1909) demonstrated similar, though not necessarily identical developments in spoken French, Rheto-Romance, Romanian, many of the German dialects, most of Slavic, and in Armenian. An attempt to account for this wide-spread phenomenon, which is not limited to IE languages, was made by Allen (1964). This feature thus is so solidly an Indo-European (and perhaps universal) phenomenon that Dravidian influence need not be invoked. Moreover, Bloch (1925:8-9) argued that (the Indo-Aryan version of) this feature has no Dravidian equivalent.

As for nominal style, already Jacobi (1903) had stated that this feature tends to be found in all languages which have for a long time established a scientific register: Abstraction of thought tends to be mirrored by the more abstract style of nominal syntax (rather than the more concrete, tense-, mood-, and actor-oriented verbal syntax). Renou (1956b) showed how this style developed in the observable history of Sanskrit and spread beyond its original (and normal) bounds. It is not yet found in the saṃhitās or in Vedic prose; even the language described by Pāṇini still lacks this feature. However, in the late Vedic sūtras, especially in those not limited to religious matters but dedicated also to secular topics (such as phonetics, grammar, metrics, astronomy), this style begins to blossom. Renou showed how this reflects the special exigencies of this literature in which brevity [as well as abstractness] was valued very highly. Due to the influence of this literature on later thought, and especially because Pāṇini (though not sanctioning it for the normal, spoken language) employed this style in his grammar, this feature acquired a literary prestige which permitted it to be used in other, nonscientific literary genres of the Classical period. However, even then it remained essentially genre-bound. (The style is found also in Pāli prose, contemporary with the sūtra literature and similar to it in its subject matter and general objectives.) Renou concluded that we are here dealing with a language-internal, genre-bound, literary innovation for which it would be difficult to assume outside influence. Note further that Davane (1956:46,140-3) has shown that, at least outside of Pāli prose, nominal style does not normally appear in the vernacular Middle Indo-Aryan dialects, except in very late texts which are influenced by the 'ornate style' characteristic of the Classical Sanskrit period. That is, throughout the history of Old and Middle Indo-Aryan, nominal style remained a genre-bound, stylistic feature, never becoming a general feature of the language.

Finally, the distributive use of āmreḍita-compounds has Indo-European ('iterative') parallels and perhaps antecedents; cf. Dressler 1968. Master (1930:140) has given an even more exact parallel from modern Iranian (Pers. yak yak gūsfand-rā mi-kušt 'he was slaying the sheep one by one'. Even Gatha-Avestan already offers distributive reiterations like narəm narəm 'man for man'.

4.2: SOV: The claim that Indo-Aryan SOV must be an area-induced innovation rests on the premise that PIE either had SVO (cf. Friedrich 1973, In Press) or was turning toward SVO (Miller 1975).

4.2.1: In his more recent publication, Friedrich offers an admittedly 'polemical synthesis of the arguments for PIE' as having SVO. His arguments can be summarized as follows.

(a) Beside dominant Adj. + N order, there is sufficient evidence for N + Adj. to cast doubt on SOV for PIE.

(b) As for the relative position of noun and genitive phrase, GN is much less common or dominant than NG, indicating that SOV is less likely than SVO.

(c) In comparative constructions, most of the languages, except Tocharian, Hittite, and Sanskrit (Iranian being uncertain), are in favor of Adj. + Standard. (The location of the Pivot needs to be studied more fully.) Altogether, the evidence for Adj. + Standard is better, supporting SVO.

(d) In relative clause constructions, even the 'eastern' languages have a high incidence of postposed Rel. Cl. Also the introductory relative marker argues for VO.

(e) The IE adverbial particles (Friedrich: 'locative auxiliaries') normally precede the verb, indicating SVO. With respect to the noun, they are usually postpositive in Hittite and Tocharian, although the latter also has prepositive order. In Vedic, they are postpositive by a ratio of 4 : 1, while later on, postpositive order becomes more general, due to 'a long-term drift to the rigid postposing of the modern Indic languages.' (Friedrich considers this drift to indicate an original prepositive order.) Elsewhere, preposing is prevalent. The use of postpositive particles in Greek 'could reflect a partial adjustment to a substratum.' Altogether, then, SVO is the favored order.

(f) The verb more or less follows the pattern SOV, at least in the early stages of Anatolian, Indic, Iranian, Tocharian, Italic, Baltic. But the pattern is not rigid in Hittite and 'weak' in Vedic. If in the modern Indo-Aryan languages we find more regular, though still not rigid SOV, this again shows an Indo-Aryan drift toward SOV. In Old Iranian, the prevalent order is OV, but not strongly so: non-direct and secondary objects, as well as complements may follow the verb. Modern Persian has SOV, but SVO dominates in the colloquial language, indicating a 'reversion' to the VO type. In all of these languages, OV thus is by no means rigid. On the other hand, the majority of languages, including Albanian and Germanic, have VO; Common Slavic basically has VSO (beside SVO), except for West Slavic SOV; Old Armenian has SVO and VSO; Celtic consistently has VSO. As for Old Irish in-

stances of SOV, these are 'marked alternates within a particular literary tradition' (cf. Wagner 1967). Homeric Greek has OV and VO in a ratio of 3 : 2, but Gapping supports SVO. The drift of the language is toward SVO.

(g) The inflected auxiliary normally precedes the nonfinite verb 'in Homeric Greek and the other ancient dialects', indicating SVO.

(h) The negative particles mē, ne, and the augment e- precede the verb, indicating VO.

(i) In compounds, those which exhibit a VO pattern are more archaic than those with OV.

(j) In terms of areal distribution, the SVO languages are central, Baltic SOV being the result of Finno-Ugric influence. SOV (beside vestiges of SVO) is found in the eastern languages, where OV is an areal feature. Similarly for Hittite, located in an area where Sumerian, as well as Semitic Accadian have SOV. That is, in these areas SOV may be substratum-induced. As for Italic, 'The fully developed [SVO] of later Romance may reflect, not the emergence of something entirely new, but the recrudescence and strengthening of colloquial patterns of great antiquity.' Finally, Celtic VSO may be due to interaction with Proto-Berber or some other 'Afro-European' language.

4.2.2: Friedrich's arguments are well taken, to the extent that they challenge the overly simplified view that Proto-Indo-European (always) had SOV. However, in many details his arguments are unacceptable.

As for points (a), (b), and (d), we are dealing with features which have no diagnostic value whatsoever (in terms of Greenberg's indices for word order) for arguing against SOV order. As Greenberg (1963:100) clearly stated, the type with SOV and postpositions but N + Adj. and NG is 'very nearly as common' as the 'pure' SOV type exemplified by Turkish. And 'The tendency of relative clauses ... is even stronger than that of adjectives to follow the noun.' This results from 'a general tendency for comment to follow topic.'-- It is thus of no significance that there are instances of N + Adj., NG, N + Rel.Cl.; but it is significant that virtually all the languages also show the obverse order which naturally suggests OV.

As for point (e), the order Adv.Particle + Verb can be said to argue for VO only if the adverbial particle is in fact a (verbal) auxiliary. However, I know of no evidence in favor of that assumption. Friedrich's claim that the postpositional use of these particles in Greek may be substratum-induced is mere supposition. The fact that in their postpositive use, these particles by and large retain their Indo-European accent (cf. ápo vs. amphí = Skt. ápa vs. abhí), while as prepositions they do not (cf. apò = amphì) suggests that postposing is an archaism and (proclitic) preposing a Greek innovation; cf. Schwyzer 1939:387-8. Daly (1973) has argued that the archaic survivals of Lat. mecum 'with me' (etc.) in the Romance languages (cf. It. meco, Span. (con)migo) show that postpositions (and thus SOV order) are an IE archaism. Compare likewise the archaic, frozen, postpositive patterns of English and German thereby, wherefore, damit, wodurch.

Concerning Friedrich's verb-position arguments, it should first be noted that also the earliest Germanic had SOV; cf. Smith 1971. For Slavic, Berneker (1900) showed that verb-final order was original in descriptive and general prose and that verb-initial order was employed in lively narration, while verb-medial order originally was used only occasionally, but became more common as time progressed. Wagner's argument that Old Irish SOV cannot be a relic is open to two objections: (a) As Wagner himself noted, the same highly poetic texts which contain SOV also show the synchronically unusual order GN, an order 'harmonic' with, and thus supporting SOV. (b) Even if the SOV (and GN) order were 'mere' poetic devices, such devices hardly ever are free inventions. They usually have real, frequently archaic linguistic antecedents. As for Friedrich's Gapping arguments for Greek, it should be noted that Subbarao (1972 a,b) has convincingly demonstrated that arguments of this sort are of no diagnostic value in determining (underlying) word order. Add to these observations the fact that in Latin and Germanic there is clear, documented evidence for an increasing development from SOV to SVO (cf. Linde 1923, Smith 1971), and Friedrich's case is weakened even further. Friedrich's suggestion that, at least in Italic, this phenomenon may be a 'recrudescence' of an older colloquial SVO type cannot be accepted as it stands. For as Smith (1971:292) and apparently independently Robertson (1975:146-7) have collectively shown, the survival of SOV in dependent clauses in German, Middle English, and Old French shows that SOV is a genuine archaism, surviving in marked function in accordance with Kuryłwicz's fourth law of analogy, and that SVO is an innovation. Finally, it is by no means clear what is meant by SOV, SVO, VSO in many of the recent discussions of basic word order, Friedrich's probably included. If SOV is meant to refer only to verb-final (XV) clauses, this will provide for different statistics from a count based on the interpretation of SOV as meaning that the verb follows the object (OV). Thus, Fischer (1923) showed that until quite late, Greek was pretty solidly (S)OV although, as Kieckers (1911) had demonstrated, it may be heavily VX. As Fischer showed, the X after the V usually consists of adverbial expressions or other material not strictly-speaking necessary for the completion of the sentence. This is also the pattern established for Vedic by Gondá (1959:7-69); and, as Friedrich recognized, it is found also in Old Persian. It is, finally, apparently still found in Modern Persian (cf. Alavi & Lorenz 1967:32-3,64-5) and seems to be a possible pattern also in Hindi. It may thus well be that Proto-Indo-European had SOV, but not necessarily XV, as its basic, unmarked order.

(Concerning the (subsidiary) point (g), I have the impression that Sanskrit and Latin normally place the auxiliary after the nonfinite verb; and Smith (1971) has plausibly argued for this as the oldest pattern of Germanic.)

4.2.3: At the same time, however, there is, as has long been realized (cf. e.g. Berneker 1900, Kroll 1918), evidence also in favor of VSO, an order found in marked function in virtually all of the IE languages. Miller (1975) convincingly showed that this marked and thus archaic order, in conjunction with the archaic VO-compound type (vs. the usual, productive OV type), points to an early stage at which PIE had VSO as its basic order,[18] and that, still in PIE times, there was a shift from this order to SOV. Note

that this change from VSO to SVO may well account, at least in part, for the fact that none of the early IE languages is a 'pure' SOV language.

4.2.4: Miller concludes that late PIE was 'in the process of shifting to SVO', except in the 'eastern' languages where substratum influence may have inhibited the shift. Like Friedrich's areal arguments, however, this view cannot be considered conclusively established.

It is true, Masica has shown (1974) that Sanskrit and Tocharian belong to an 'eastern' ('Indo-Altaic') area with basic SOV, while the western languages belong to an SVO area. However, this does not necessarily indicate that it was the eastern IE languages which innovated in this respect (or resisted a general PIE development). Another interpretation is possible and, considering the evidence, perhaps preferable, namely that PIE itself once belong to the 'eastern' SOV area. This would account for the PIE change from VSO to SVO noted by Miller. (Cf. also 4.5.1 below.) As the 'western' languages became separated from this area, they may have developed an order SVO. This would account for the observable increase in this order in historical times, as well as for the relative archaism of SOV (beside VSO) noted in virtually all of these languages. As Masica has pointed out, also other, non-IE languages show such a development once they are located in the 'western' area. One might attribute this to indigenous substratum influence. Or, considering that SVO (or at least XVY) seems most advanced in Greek, one might argue for diffusion of SVO from Greek. But perhaps the most plausible explanation, considering our ignorance about pre-IE substrata in Europe (including Wagner's and Friedrich's Proto-Berber vel sim.), would be to assume that these western languages had been on the periphery of Masica's 'Indo-Altaic' SOV area, only incompletely participating in the area-induced PIE change of VSO to SOV and retaining VSO to a higher degree than the 'eastern' languages. In that case, the usual 'western' SVO may be seen as a compromise, a syntactic 'blending' between the older VSO and the innovated SVO (helped along, perhaps, by a reinterpretation of XVY as SVO), while the Celtic 'recrudescence' of VSO would constitute a genuine 'reversal' in the area most peripheral to the change from VSO to SOV and thus, perhaps, only temporarily (and mainly in its poetic language (?)) affected by it.

Whatever the correct interpretation of the 'western' SVO (or VSO) may be, the argument that PIE had SVO and that Sanskrit SOV must result from the influence of a post-PIE substratum cannot be considered established.

4.2.5: Notice in this respect that until very late Epic and Classical times, Sanskrit still shows evidence for (marked) VSO order (as in āsīd rājā 'there (once) was a king') beside unmarked SOV. There is, to be sure, some evidence for an increase in SOV, or rather XV, over XVY in the prose of the Brāhmaṇas. However, this develcpment may well be part of the more general, native trend towards simplifying and 'streamlining' the language by eliminating alternative structures (cf. Hock & Pandharipande To Appear:§2.6.2).

As Gonda (1952) showed, even as late as the Kāvya literature and the Viṣṇu-Purāṇa, XVY still is found as a common pattern.

It is only in the modern Indo-Aryan languages that VSO is eliminated and that XVY is considerably reduced in its occurrence. This may well be due to areal influence, but proves nothing for the early period. Masica's tentative argument (1974) that modern Kashmiri SVO may be an archaism, however, must be considered doubtful. The fact that in relative clauses SOV is the normal order shows that this 'marked' order is more archaic than SVO. Moreover, the evidence in Grierson 1919 suggests that outlying dialects like Kiṣṭawārī have SOV order, a fact which would seem to corroborate the view that the central Kashmiri SVO is an innovation.

4.3: Retroflexion: It is generally conceded that 'regular', non-sporadic retroflexion may, at least in part, be due to internal developments based on Indo-Iranian antecedents; cf. the references apud Kuiper 1967b. The first to have tried to demonstrate this possibility seems to have been Bühler 1864.

4.3.1: The most up-to-date and to my mind most acceptable formulation of this view is found in Burrow 1955:90-5. Burrow's arguments can be summarized as follows.

Dialectal PIE had a change by which s (z) became š (ž) if preceded by RUKI (hence *nizdo- > *nižḍo- 'nest'; *dwis-to- > *dwiš-to- 'hated'). In Indo-Iranian, this š/ž merged with a š/ž developed from PIE palatals before obstruents (and after certain obstruents); cf. *wiḱ-to- > Av. viš-ta- 'entered', *pḱu-ment- > Av. fšu-mant- 'rich in cattle'. However, sḱ resulted in in *śś, whence *šš by assimilation (> Av. š as in *gʷm-śke-ti > ja-sa-iti 'goes'). In Indo-Aryan š/ž acquired retroflex articulation, and neighboring dentals became retroflex by assimilation, as in *dwiš-to-, *wiš-to- > Skt. dviṣṭa-, viṣṭa-. Sibilant sequences, of the type ss (< ṣs), šš, ss, were subject to dissimilation, yielding ṭṣ, cś, ts. (Due to a very early, PIE simplification, ss and ṣṣ may also appear as s and ṣ in archaisms; and in the locative plural of nouns, they may appear as unmodified ss and ṣṣ, or ḥs, ḥṣ, as the result of a later generalization of external sandhi.) In addition, z became ḍ before bh, as in *wiḱ-bhis > *wiz-bhis > viḍbhis 'by the clans', and was lost before voiced apicals. Finally, ts became ṭ by final cluster simplification, but kṣ elsewhere, while cś was realized as (c)ch. These developments, at least some of them, yielded retroflex consonants which were unpredictable in terms of their phonetic environment. Thus *nizdo- > *nižḍo- > *niẓḍa- > nīḍa- 'nest'; *wiḱ-s > *wiš-š (cf. Av. viš with sibilant degemination) > *viṣṣ > *viṭṣ > viṭ (sg. N) 'clan' (vs. *wid-s > vit 'knowledge'); but *wiḱ-su > *wiš-su > *wiš-šu > *viṣṣu > *viṭṣu > vikṣu. Similarly *dwis-s 'enemy' becomes dviṭ via dwiss and pl. L *dwis-su yields dvikṣu via dwiššu. (The later pl. L viṭsu, dviṭsu owes its existence to generalization of the pattern established by sg. N viṭ, dviṭ, pl. I viḍ-bhis, dviḍ-bhis.)

4.3.2: To my knowledge, only Kuiper (1967b) attempted to show that this type of regular, internal explanation of retroflexion is unacceptable. However, Kuiper's attempted refutation is seriously flawed both by not considering Burrow 1955 (but only two more recent, less explicit and general papers: Burrow 1959a,b), and by his misreading of the arguments traditionally used.

Thus he inexplicably argues that the postulated change of PIE palatals to Sanskrit retroflexes would wrongly predict PIE *ḱmtom to yield Skt. ṭṣatam* (rather than attested śatam '100'), ignoring the fact that this development--however formulated--was always considered to have been conditioned, and not universal. Similarly, he attributes to Burrow a claim he never made, namely that 'both Skt. kṣ and Av. š̌ derive from *ṭs.'

On the more positive side, Kuiper argues that PIE palatal stop + s yielded 'š̌ in Iranian and kṣ in Indo-Aryan... There is no reason therefore [to doubt] that ... vikṣu represent[s] the normal development of PIE ḱs in Indo-Aryan ... no matter how [the] prestage of Indo-Aryan kṣ and Iranian š̌ is exactly reconstructed.' The 'anomalous' ṭ of sg. N viṭ (for expected -k from -kṣ) is in his view due to morphological reanalysis: PIE *speḱs should have yielded spak*; but because of the oblique stem spaś-, a new synchronic base form /spaś-s/ is created. Since /ś/ merges with ṣ before apical stops, it is synchronically changed to ṣ also before the apical -s of the nominative singular ending. In this fashion, stems in ś and in ṣ become more similar to each other. The further development of -ṣ-s to -ṭ results from the following process. The 'conscious will of the speakers to counteract the normal phonetic tendency of their language [to degeminate] and the effort to over-emphasize the ṣ of the [following] morpheme ... led to a realization of the second ṣ as the affricate [ts] , to mark off the beginning of the morpheme boundary ...' Thus, spaṣ-s, dviṣ-s become spaṣ-ts, dviṣ-ts, whence spaṣ-ṭs, dviṣ-ṭs by assimilation. These forms result in spaṭs, dviṭs (with a cluster simplification recurring in *vṛskta- > vṛkta- 'cut') and, with final cluster simplification, spaṭ, dviṭ. (In roots in -ṣ, this development is limited to monosyllabic stems; hence haviṣ-su appears as haviṣṣu/ haviḥṣu.) On the other hand, the analogy of stems in final palatal sibilant (like spaś-) could lead to the appearance of forms in -kṣ- in stems in final -ṣ (such as dvek-ṣya-ti 'will hate' from dviṣ-). That the kṣ (rather than ṭs) of the latter stems is an innovation is evident from the fact that kṣ from ṣṣ is rare in the Rig-Veda and never found in the locative plural.

4.3.3: Even Kuiper's positive arguments cannot be considered acceptable.

First of all, his consideration of Rig-Vedic attestations is incomplete. While it is true that we find no Rig-Vedic attestations of a locative plural in -kṣ- from roots in -ṣ, we also find none in the -ṭsu predicted by Kuiper. (As a matter of fact, while -kṣ-forms may be rare even elsewhere, there is not even a single Rig-Vedic medial -ṭs-form from a root in -ṣ.) On the other hand, stems in ś or other palatals furnish evidence not only for -ksu (cf. vikṣu (passim), srākṣu 5:53:4), but also indirectly for -ṭsu (cf. anaḍutsu 3:53:18 which seems to be from anaḍ-uṭ-su by dissimilation). It is true, the latter form occurs in a late hymn, while the two former are attest-

ed from the earliest period. The type in -ṭsu thus probably is an innovation. But as long as we do not have any direct attestations of a locative plural from ṣ-roots, it is hazardous to argue that the latter furnished the model for the former.

In word-final position, the earliest Rig-Vedic attestation of a root in -ṣ shows k (sg. 2 piṇak 6:17:10). This is the only form from ṣ-roots in a hymn of the archaic period. During the same archaic period, roots in palatal have final ṭ in seven roots (aś-, rāj- 'king', rāj- 'shine', vah-, ṣaṭ < *seḱs '6', sah-, spaś-) and only two in k (naś- 'destroy', dṛś-). The first ṣ-form in ṭ (-dviṭ) appears in a relatively late hymn (6:47:16), at a time when the palatal roots have considerably increased their k-forms (with nine instances of k-forms vs. 11 of ṭ-forms, not counting recurrences of the same form, vs. 2 : 8 in the archaic period). This pattern hardly supports the view that k is more archaic in the roots in palatal than in those in ṣ, or the view that ṭ is originally at home only in the ṣ-roots. (If anything, it might suggest the opposite. But the way of caution would seem to lie in not overestimating the significance of these statistics.)

Moreover, the question arises as to how one should account for the fact that forms like PIE *teḱs-ti yield Skt. tāṣṭi and not the tākti* expected if Kuiper were correct in claiming that PIE *ḱs yields Skt. kṣ. (For the development of kṣt to Skt. kt, cf. PIIr. *abhakšta 'chose for himself', Av. abaxšta vs. Skt. abhakta.)

Finally, Kuiper's claimed development of ṣ-s (and similarly of s-s) to ṣ-ts (and s-ts) seems to lack any known precedent.

4.3.4: These difficulties are removed if we accept Burrow's analysis with only some minor modifications and additional motivations.

The type vikṣu does in fact seem to be more archaic than the type viṭsu, not only in palatal roots, but also in ṣ-roots. The innovated type in -ṭsu is to be accounted for as an extension of the external sandhi pattern accounting for sg. N viṭ, pl. I viḍ-bhis. For these developments, and for what I believe to be the correct explanation of the bh-case forms (as well as of the bh-case and locative plural forms of is- and us-stems), cf. Hock 1974.

As for viṭ, -dviṭ vs. -nak, piṇak, the forms with ṭ seem to be more original; the k-forms can be explained as owing their existence to dissimilatory developments; cf. e.g. Meillet 1905/06.

Forms like tāṣṭi find their natural explanation in a Burrovian derivation of the sort *ḱs > PIIr. *ǩs > *ǩš. While *ǩš > *ṣṣ usually yields *ṭṣ (> kṣ or ṭ), in the environment between obstruents the medial sibilant was lost (as in *abhakšta > abhakta)--apparently early enough to 'bleed' the dissimilation of ṣṣ to ṭṣ. The fact that reconstructed ss and śś were regularly dissimilated to *ṭṣ, *ćś, while ss was only sporadically dissimilated to ts, can be accounted for as due to the absence of a contrast ṣ/ṭ or ś/c before ṣ and ś, but the existence of a contrast s/t before s; cf. Hock 1975, with many precedents for the postulated dissimilatory process.

Finally, even the fact that PIIr. š yielded retroflex ṣ in Indo-Aryan, but not in (most of) Iranian, can be accounted for: The Iranian outcome of the unchanged PIE palatal *ǩ was ṣ (or 0); as a consequence, š could be ar-

ticulated as a palatal. In Indo-Aryan, however, *ḱ yielded ś, a palatal sibilant. If IIr. s̑ was to remain distinct from this palatal ś, this could be achieved quite naturally by articulating s̑ not as a palatal, but as a retroflex. That shibilants can be articulated both as palatals and as retroflexes is well known. The case of German is especially illustrative on this point: [s̑] has 'palatal', blade articulation (with lip-rounding) in some idiolects, while others have 'apical', retroflex articulation (cf. e.g. Martens & Martens 1965:117).[18a] Both articulations, however, are distinct from the pure palatal articulation of [ç]. Even without such a palatal/nonpalatal contrast, shibilants can vary between 'palatal' and retroflex articulation; cf. Heffner 1964:156 for English.

4.3.5: As for "sporadic" retroflexion, there is ample evidence to show that it can be accounted for in purely internal Indo-Aryan terms; cf. the discussion and literature in Hock & Pandharipande To Appear:§2.2.[19]

4.3.6: Moreover, it is by no means certain that retroflexion is an "un-Indo-European" phenomenon. Rather, it can be shown that retroflexion is not only a wide-spread, but also a natural, phonetically well-motivated phenomenon, found, at least dialectally, in the majority of the subbranches of Indo-European.

Already Bühler (1864) had referred to dialectal English retroflexion, of the type found in card [ka:ɖ] (cf. also, more recently, Wakelin 1972:99). Konow (1903:455) compared the similar retroflexion of dentals after (lost) r found in Norwegian and Swedish dialects. As Steblin-Kamenskij (1965) showed, in the more archaic area of this dialect group we find a triple contrast, between retroflex (from r̥ + dental), alveolar (from r + dental), and unmodified dental. Similar developments of r + dental to retroflex are found in Faroese (Lockwood 1955:20-1), in Icelandic ('dental' vs. 'alveolar', an incipient contrast; cf. Kress 1937:86, fn. 1, and 125-6), in Irish and Scots Gaelic dialects (Borgstrøm 1940:169-72, 1941:44-5, 101-2, Oftedal 1956:126-7, Wagner 1958:maps 128, 200, 255), and in Italian dialects (Rohlfs 1949:302, 320, 433). Cf. also tr, dr > [ʧ,ʤ] in true, drew (vs. [ʧ,ʤ] in chew, Jew) in many American English dialects, as well as the change of r to a retroflex glide in American English and in some British English dialects. Outside of Europe, one may compare the fact that initial tr yielded s̑ (presumably via ʂ) not only in some of the East Iranian dialects (cf. Morgenstierne 1958:159, Henning 1958:109), where South Asian areal influence might perhaps be assumed, but also in the NW Central Persian dialect of Sangisari (cf. Morgenstierne 1958: 159, 173). Notice also the change of sr to s̑ in Khwarezmian (Henning 1958: 115).

Another source for retroflexion is geminate ll (as well as, perhaps, nn in Breton); cf. Rohlfs 1949:387-90 (Italian dialects), 1970:152-4 (idem, plus Gascon, Asturian Spanish), Jackson 1967:passim (Breton dialects (?)). Considering that palatal [ʎ] and [ɲ] are more regular outcomes of ll and nn (as in Spanish), it is perhaps not unjustified to connect these instances of retroflexion with other cases where retroflexion seems to be related to palatal(ization). In addition to the evidence for 'palatal' s̑ beside retroflex ʂ

cited in section 4.3.4 above, note also the change of palatal s̆ to retroflex ʂ in SW Portuguese (Hammarström 1953:173-4) and the palatalization of [x] to ʂ in Cypriot Greek (Newton 1972:22-3 with 26). Compare in this respect that also in Tocharian, retroflex segments result from palatalization, as in s > ʂ (vs. k or ts > ś); cf. Krause & Thomas 1960:61, 63.

Quite different is the development found in certain Texan dialects of American English reported to me by Huntsman, where the dental fricatives [θ] and [ð] have become dental stops [t̪] and [d̪] , while alveolar t and d are realized as retroflex [ʈ] and [ɖ]. However, the principle is similar to that invoked for Germ. [ʂ] (or [sʷ]) vs. [ç], (pre-)Indo-Aryan [ʂ] vs. [ś], namely the principle of polarization (or maximalization of phonetic contrast). And it seems to be this principle which is responsible also for the fact that, after the loss of the conditioning alveolar r, the assimilated alveolar t (< [t̪]) becomes retroflex, thus becoming maximally distinct from unchanged dental [t̪].

4.3.7: As indicated earlier, Bhat (1973), referring only to the Norwegian/Swedish, English, Faroese, and Celtic phenomena, tried to account for these instances of retroflexion as due to Uralic substratum influence.

However, as indicated in 3.6 above, the question of Proto-Uralic retroflexes is still a matter of controversy (as Bhat himself realized). Note also that there seems to be no evidence for retroflexion in either Finnic or Lapp. And to my knowledge, there is no evidence even weakly suggesting a Uralic triple contrast between dental, retroflex, and alveolar, comparable to that developed in Norwegian/Swedish, the dialects most proximate to any of the attested Uralic languages. In addition, it is not at all certain that a Uralic substratum ever existed in any of the non-Scandinavian areas, especially in the more southern areas of Cyprus, Southern Italy, Gascony, and Spain.[20]

Moreover, Bhat's argument that retroflexion must somehow be special because it introduces a new feature can hardly be considered convincing. For in many languages, palatalization likewise introduces a new feature. Should therefore also this (very common) phenomenon be claimed to be either inherited or due to substratum influence? (Note that, as in the case of retroflexion, the actual palatal articulation of palatalized segments is no doubt the result of polarization: [kʸ] : [k] > [č] : [k].)

Finally, Bhat's general conclusion that retroflexion is either inherited or substratum-induced must be viewed with some suspicion. For if carried to its logical conclusion, this claim seems to entail the assumption of a polygenesis of language, such that some languages, from the very beginning, had the feature of retroflexion, while others did not. Clearly, in light of our

present ignorance concerning the question of a single or multiple genesis of language, such an assumption would seem premature (as well as not open to falsification and thus scientifically dubious).

4.4: api: Contrary to Emeneau's assumption, at least four of the five uses of api can be motivated in terms of intra-Sanskrit parallels and in terms of Indo-Iranian antecedents and/or general Indo-European parallels. Even use (4), which has the least amount of such antecedents and parallels, may well be an internal development.

In the uses (1) 'also', (2) 'and', (3) concessive 'even', and (5) indefinitizing '-soever', api parallels (some of) the uses of the native, inherited IE particle ca "and". To these uses should be added at least one further parallel, namely the use of both api and ca as an emphasizing particle (henceforth: use (6)). Use (6) can be viewed as an intermediate step in the semantic development from (1)/(2) to (3). (For the meanings and uses of ca and api, cf. s.vv. in Böhtlingk & Roth 1855 and 1858.) Moreover, it can hardly be due to accident that in all of these uses, except apparently in use (5), api may occur in combination with ca (as cāpi, api ca, ca ... api); cf. Böhtlingk & Roth 1855:s.v.api. It is thus quite possible that in these uses, api developed parallel to, and on the model of, the inherited particle ca.

Three of these uses, namely (1), (2), and (6), are found--attached to the same particle *api--also in another early Indo-Iranian language, Avestan (cf. Bartholomae 1904:s.v.aipi). Of these, at least (1) and/or (2) is found already in Gāthа-Avestan; cf. Reichelt 1909:357 (with example on p. 358). Moreover, also Armenian offers a cognate, ew (likewise from PIE *epi), in the meaning 'and'; cf. Ernout & Meillet 1951:s.v.et, Schwyzer 1949:465. Finally, note that Greek offers the expression epì dé 'and in addition'; cf. Schwyzer 1949:465. It is thus likely that uses (1) and (2) go back not only to Indo-Iranian times, but perhaps to dialectal Proto-Indo-European times, extending at that time through those dialects which share also another innovation, namely the use of the augment e-.

Moreover, the development of the original locatival adverbial particle *epi into a conjunction-like particle has parallels in other Indo-European languages. Ernout & Meillet (1951:sv.et) compare this development with that of the original locatival adverbial particle *eti, where Indo-Iranian offers (*)ati 'beyond', Gothic retains this use of the particle in id-weit 'reproach', while Greek has éti 'in addition', Latin et "and", Gaulish eti-c 'and', Gothic ib 'but; if'. To this might be added Old Irish ocu(i)s 'and' beside ocus, acus 'near' (Thurneysen 1961:549); Engl. too 'also' beside to; Slav. da 'so, and, but; that', related to E to(o) (with the semantic development 'in addition' → 'additionally, and' → subordinating conjunction; cf. Pokorny 1959:182).

More importantly, also the uses (3), (5), and (6), though not directly attested for PIE *epi outside of Sanskrit and Indo-Iranian, find ready parallels in the words for 'and'/'also' of other Indo-European languages, suggesting that uses (3), (5), and (6) are natural developments for particles meaning 'and' or 'also' (i.e. both for Skt. ca and for Skt. api). For uses (6)

and (3) compare Lat. et "and", etiam "also" in etsī, etiamsī 'even if'; Gk. kaì "and" in ei kaì, kaì ei 'even if', as well as kaì as emphasizer in expressions like kaì mála 'very much indeed'; Germ. auch "also" in wenn auch 'even if' and as an emphasizer in expressions like Auch er kam 'even he came'; Lith. ir "and" in kàd ir 'even if', cf. Latv. ir 'even' (emphasizing) (Senn 1966:300-4, Fränkel 1962:s.v.ař). For usage (5) compare the use of PIE *k^we "and" as an indefinitizer in many of the Indo-European languages, not only Sanskrit, but also Iranian (Bartholomae 1904:s.v.ca), Lat. quisque 'who(so)-ever' (etc.), Goth. hwazuh (id.) (etc.). Compare further, with different particles, Hitt. kuiš(š)-a 'every, who(so)ever' (with -a "and"; Friedrich 1960:70); Lith. bèt 'but' (originally betai 'and (that)') in bet kàs 'who-(so)ever' (etc.) (Fränkel 1962:s.v.bèt, Senn 1966:202-3, 300-4); Germ. auch "also" in wer auch (immer) 'who(so)ever' (etc.).

Also the use of api as a question particle, a use which Emeneau could not connect with Dravidian, has Indo-European parallels. Compare first of all Gk. kaì, Lat. et at the beginning of questions to indicate surprise, objection, etc. This may perhaps have been the starting point for interrogative api. However, there is perhaps another possible development, parallel to that of Baltic ir/ar/er into OLith. er, Lith ař 'or'/question particle, beside Latv. ar(ī) 'also', Lith. ir 'and, also', OPru. ir 'also', Latv. ir 'even' (cf. Fränkel 1962:s.v. ař). Here the semantic development may perhaps have been from coordinating 'and' to coordinating 'or' → 'whether (... or)' → question particle. (For Sanskrit, note that at least ca can have the meaning 'or'; Böhtlingk & Roth 1858:s.v.)

The use of Skt. api which has the least amount of solid intra-Sanskrit or Indo-European parallels is use (4), the 'completive' use after numerals and quantifiers. However, notice first of all that also the inherited particle ca "and" can occasionally be used in this function; cf. Speyer 1896:71 (with fn. 1). Note especially that the example cited by Speyer is from the Śatapatha-Brāhmaṇa and thus seems to predate the similar attestations of api. Compare further Gk. kaì polús 'much, many (altogether, indeed)', kaì pénte periploménous eniautoûs (Il.23:833) 'full five ...'; Lat. plerīque 'many'; Germ. Alle, aber auch alle kamen 'all (everyone of them) came'. To be sure, in all of these cases we are probably merely dealing with occasional extended uses of emphasizing "also", and not, as in later Sanskrit api, with a standardized, 'totalizing' usage. However, there seems to be no reason against deriving this later 'totalizing' use from such occasional uses of an earlier emphasizing usage (cf. above all the use of ca in the Satapatha-Brāhmaṇa), rather than following Emeneau in assuming that the 'totalizing' connotations of 'and/also' were the source.

It is thus at least possible that the late use of (4) may have developed internally, from other uses which have clear Indo-Iranian and/or Indo-European antecedents or precedents. Moreover, all the uses of the early language, including that as a question particle, have solid Indo-Iranian and/or Indo-European antecedents or precedents. At least for these uses, it is thus unnecessary and unmotivated to assume non-Indo-European origin.

4.5: Absolutives: As a morphosyntactic category, the Sanskrit absolutives are not at all without Indo-European parallels. Their (only post-Rig-Vedic) use in 'chains' of absolutive clauses, followed by a single clause with finite verb, to be sure, is specifically Sanskrit. However, within Sanskrit, this use can be viewed as part of a general development from finite-verb to non-finite-verb and nominal syntax which seems to be a native, literary development.

4.5.: As indicated in fn. 13 above, absolutives are found also in East Iranian dialects.[21] More important, however, is their occurrence in other IE languages where they cannot be considered part of the South Asian areal phenomena. Thus, Armenian offers a construction of preposition plus infinitive which is used absolutively; cf. Jensen 1959:184. Greek has deverbal adverbials in -don, -da, -dēn 'zur Bezeichnung einer Nebenhandlung' (Schwyzer 1939: 626-7). Schwyzer (ibid.) compares their usage to that of the Latin type in -tim and of the Skt. absolutives in -am, equating the -on of Gk. -don with the Skt. -am, as well as with the Oscan-Umbrian infinitive marker -um. He further compares (1949:410-1) Homeric expressions like aghkí-molon 'coming near', whose -on is even more closely relatable to Skt. -am, Osc.-Umbr. -um. In addition, Greek developed an 'absolutive infinitive'; cf. Schwyzer 1949: 378-9. Finally, Bader has argued that Greek also had absolutives in -tí, morphologically related to verbal abstract nouns (1970).

As is well known, also Latin has an absolutive ('gerund'), viz. the ablative of the verbal noun/adjective in -ndo-. Strunk has recently argued that this formation in -ndo- is in origin 'ein nach Art altindogermanischer Sprachen in Kasusformen auftretender "Infinitiv"' (1974:285). In the modern Romance languages, this absolutive has taken over many of the functions of the Latin (present) participle.

Also Tocharian offers an absolutive, made from a verbal noun in -or- plus the ablative suffix; cf. Krause & Thomas 1960:185-6. Notice further the English absolutive construction in -ing (as in His parents having returned, he began to smile) which is built on a form which in origin is a verbal noun (even if today it may also function as a participle). Also the Celtic constructions of the verbal noun with prepositions, which have completely replaced the present participle (cf. e.g. Pedersen 1913:417), may be compared.

While the absolutives discussed so far are all based on verbal nouns, they do show affinities with the participle (especially in Romance, Celtic, and English--an areal feature ?). It is therefore not surprising that in some of the Indo-European languages, frozen case forms of the participle(s) may function as absolutives. Cf. Entwistle & Morison 1949:207 and passim (for Slavic), Senn 1966:181,473-5 (for Lithuanian), and Schwyzer 1949:410-1 (for Modern Greek).

There is thus ample evidence for absolutives in the other IE languages, as well as for their close morphological relationship to verbal nouns and adjectives (participles). While some of these can be explained as the result of later developments (cf. especially the Greek 'absolute infinitive'

and the participle-derived absolutives of Slavic, Baltic, and Modern Greek), many of the forms found in the earliest attestations (e.g. Gk. -(d)on, -tí, Lat. -ndo-) are from the synchronic point of view morphologically quite isolated and have all the appearances of being archaisms. Moreover, in the case of Gk. -on, Skt. -am (also found in infinitives), Osc.-Umbr. -um, there is a phonological agreement in markers which makes reconstruction for the proto-language at least possible. Under these circumstances one may well wonder whether, as a morphosyntactic category, the absolutive many not date back to Proto-Indo-Eureopean times, perhaps as an ancient areal feature which, like SOV, linked the proto-language with the 'Indo-Altaic' sprachbund. (For absolutives in Uralic, Altaic, Tibetan, cf. 3.6 above. Note that already Jacobi (1897:99,101) argued for IE origin of the Sanskrit absolutive in -am. However, his arguments in favor of that view are not entirely convincing.)

4.5.2: As has already been seen, the Sanskrit absolutive in -am is relatable to verbal nouns in *-om. Similarly, the absolutive in -tvā (and its variants -tvī and -tvāya) can ultimately be traced back to (instrumental) case forms of verbal nouns in -tu-. (Cf. e.g. Renou 1930:391, fn. 1, for both of these connections.) As for the suffix -yă (henceforth written -ya), Edgerton (155:64) plausibly argued that in light of the predominant long -ā found in Vedic, also this suffix must be considered instrumental in origin. The existence of Avestan infinitives in (instrumental) -yā (cf. Reichelt 1909:200) makes it likely that also this suffix is of verbal-noun origin.

As for the usage of these forms, -am occurs already in the Rig-Veda, although often difficult to distinguish from the infinitive in -am (cf. Renou 1930). Also the absolutive in -ya is found thirteen times in the earliest hymns, and ca. 100 times in the whole of the Rig-Veda (Renou 1940). Only the forms in -tvī and -tvā(ya) are, according to Renou (1940), limited to the late or middle portions of the Rig-Veda. In light of the preceding discussion, however, one may wonder whether we are here dealing with a significant or accidental gap in the attestations. Morphologically, -tvā (etc.) is, from the synchronic point of view, just as isolated as (-am,) -ya and the Greek and Latin absolutive forms. All of these forms have the appearance of inherited archaisms, rather than recent innovations.

On the other hand, the specific syntactic uses of the Sanskrit absolutives do show certain innovatory developments. As Renou (1940) observed, the typical value of the Rig-Vedic absolutives is one of accompanying circumstances. The antecedent (and subordinating) value of the absolutives in -tvā (etc.) and -ya is, in the Rig-Veda, rare and limited to late portions. This value appears above all in the descriptions and commentaries of the ritual found in the later Vedic prose, where this value helps to clearly establish the sequence of ritual actions (cf. also Renou 1956a:46). It is also at this point in the history of Sanskrit that the later pattern of 'chains' of absolutive clauses (followed by a single clause with finite verb) seems to emerge for the first time. In earlier texts, such 'chains' do not seem to be found.

Though the development of an antecedent value for an original 'concomitant' absolutive is an innovation, this development, and the primacy of the concomitant value is wholly Indo-European in nature. In most of the IE languages, the concomitant value seems to be the more basic or original one (or

even the only one found), while--as in Sanskrit--the antecedent value is secondary. Cf. concomitant Lat. habendō 'having' = Fr. ayant vs. French-only ayant eu 'having had' (with ayant in the latter construction formally present-tense, i.e. concomitant); similarly E going : having gone. Cf. also Mod. Gk. klaiontas '(a-)crying' vs. dialectally restricted, analogical lusontas 'having loosed' (cf. Schwyzer 1949:637).

As for the increasingly subordinating and 'chain' usage of the absolutives in -tvā (etc.) and -ya, Renou observed (1956a:55-8) that it coincides with, and is part and parcel of, the general development away from (finite) verbal style and toward (non-finite) nominal style. As shown earlier, however, this development is not likely to have been brought about by (Dravidian) substratum influence.

It is thus by no means certain that even this specific antecedent, subordinating, 'chain' aspect of the Sanskrit absolutive is to be attributed to a (Dravidian) substratum. And there is no motivation (or evidence) whatsoever for attributing the early, Rig-Vedic (use of the) absolutive to such a substratum.

4.6: Quotative iti: Quotative markers (rather than subordinating, indirect-discourse markers) may not be very common in the other IE languages. However, some parallels can be found.

4.6.1: Markers of this sort seem to be of three kinds:

(a) 'THAT' (also used subordinatingly): Morphologically, this marker may be derived from a deictive or relative pronoun stem (as in E that vs. Fr. que). This marker is found e.g. in later post-Homeric Greek, Sanskrit, Avestan, Romance, and Lithuanian (cf. Schwyzer 1949:638, fn.2). It is found also in Armenian zi = prep. z + rel. pron. i (Jensen 1959:207-8, Meillet 1936: 139).

(b) 'THUS' (also subordinating): Derived from deictive or relative pronoun stems, this marker is found e.g. in Greek (cf. Hom. hṓs éphato 'thus he spoke'), Armenian ((e)t'e; cf. Jensen 1959:207-8, Meillet 1936:139), Iranian (Av. uiti), as well as in Old Norse (svá, occasionally prefixed to direct discourse). Note that Sanskrit iti morphologically and semantically belongs to this well-established Indo-European category.

(c) A 'frozen' form of the verb SAY, as in Hitt. -wa(r)-, suffixed after the first constituent of a direct discourse (DD) and relatable to wer- 'speak'; cf. Friedrich 1960:149-50, Kronasser 1962:70. Note also Arm. bam and other frozen forms of SAY; cf. Jensen 1959:188, 207. Compare additionally Lat. inquam, inquit which may be infixed after the first or second constituent of DD, but which do retain their syntactic reference (to first or third singular speakers). Compare also the common use of 'pleonastic', often standardized participial (or participle-like) forms of SAY which may accompany DD and its governing SAY in many languages, including non-IE languages (Kieckers 1915). Note that the Dravidian and Munda (Austro Asiatic) quotatives belong to this category.

As for categories (a) and (b), the two may well be considered related under the assumption that at a deep level of syntax, DD is embedded in the following fashion. (Notice that the order of constituents is irrelevant at this point.)

SAY + Th + Wh + BE + DD

On the surface, this configuration may be realized by 'lexicalizing' Th and Wh either as manner adverbs (hence 'THUS') or as a neutral pronominal form (hence 'THAT'). In addition, by some kind of wh-is deletion, either Th + BE or Wh + BE may be zeroed out (hence e.g. deictive iti vs. rel. hṓs). (An alternative consists of deleting both Th and Wh, as well as BE, leaving no surface marker.)

4.6.2: There are thus ample morphological precedents, as well as a (putative) general syntactic motivation, for the quotative use of Skt. iti 'thus'. At the same time, note that the type of quotative used by Sanskrit differs strikingly from that used by Dravidian and Munda.

However, Kuiper (1967a:91-4) was not so much concerned with possible general antecedents and syntactic motivations for the use of iti, but with the specific, surface-syntactic behavior of the particle. As Kuiper pointed out, this behavior differs from that of its Iranian counterpart, Av. uiti, in two ways: (a) In Avestan, uiti + SAY never occurs after DD; it can occur only preceding DD or 'inserted' into it. On the other hand, as early as Rig-Vedic times, iti + SAY can occur after DD. (b) While Av. uiti must always be a surface clause-mate of SAY, iti need not be. According to Kuiper's count, there are already in the Rig-Veda, eleven instances of SAY + DD + iti and twelve instances of DD + iti without SAY, indicating that iti has begun to become an independent, postpositive quotative particle. And it is this use of iti which in Kuiper's view must be attributed to Dravidian influence.

4.6.3: Kuiper's hypothesis contains two claims, one being that the postpositive use of iti + SAY is non-Indo-European, the other, that the unaccompanied postpositive, 'quotative' use of iti is non-Indo-European.

4.6.4: The former of these two claims can be more easily shown to be based on insufficient or inconclusive evidence.

While it is certainly true that Iranian (i.e. Avestan) only has prepositive or inserted SAY + uiti, it seems equally true that Iranian has only prepositive or inserted unaccompanied SAY. It is, however, questionable whether

in either of these two respects, Iranian should be considered to preserve an archaic pattern which excludes postpositive SAY (+ uiti).

Kieckers (1915) gives ample evidence from many of the Indo-European languages both for prepositive and inserted SAY and for postpositive SAY. Moreover, the specific pattern (SAY) + DD + THUS + SAY is found in Homeric Greek, where it serves as a formula usually employed to indicate the end of a particular DD or of an exchange of DD's (such as a dialogue); cf. ... kratòn d' epì mûthon ételle + DD + hós éphat' (Il.1:25-33) 'he laid upon him a stern command: "DD", thus he spoke ...' Considering that poetic formulae frequently preserve highly archaic structures, there is a good chance that this pattern is an archaism. Also elsewhere, there is evidence for considering postpositive SAY archaic. In many of the languages where it occurs, its use is much less free (i.e. much more formulaic) than the use of preposed or inserted SAY. Thus in the Old Icelandic Egilssaga, only segja occurs postpositively (and only after short DD), while segja, mæla, spyrja, svara, kveða may occur preposed, and segja, kveða inserted. Similarly, in Plato's Apologia of Sokrates, DD + SAY is the least common pattern, occurring just once (in Panú ge, ẽ d'hós '"Certainly," he said').

In light of the earlier discussion showing that verb-final SOV is an archaic Indo-European construction, but that verb-medial XVY may be found as a result of the fact that nondirect objects and the like can follow the verb, it is possible to argue that 'verb-medial' inserted SAY (i.e. DD + SAY + DD ctd.) should not be considered an independent, third variant, but rather as a derived variant of 'verb-final' postposed SAY (i.e. DD + SAY). In both verb-medial patterns (i.e. in XVY and DD + SAY + DD), it can then be argued that the surface order is the result of some movement process (henceforth: 'partial extraposition') by which all or part of certain constituents can be moved to the right of the verb, as long as what precedes the verb after partial extraposition contains at least a part of the 'object constituent' (= direct object or DD). That this analysis may be on the right track is shown by the fact that, like actual verb-final DD + SAY, verb-medial DD + SAY + DD tends to have an archaic appearance. Thus, in Old Icelandic inserted SAY permits of only two verbs (segja and kveða), while preposed SAY is not limited in this fashion. Similarly, in the Platonic text examined, only ēn and phēmì may occur in inserted position. Further, the use of inserted SAY (with or without uiti) is much less common in Avestan than that of preposed (uiti +) SAY. Finally, note that the 'frozen', archaic Hittite quotative -wa(r)-, as well as Lat. inquam, inquit are limited to medial position.

It is thus possible to argue that even Iranian preserves examples of a more 'underlyingly' (i.e. pre-partial extraposition) postposed (uiti +) SAY. Moreover, it is possible to argue that postpositive (THUS +) SAY is a feature of Proto-Indo-European. Considering that it survived (in limited, often specialized fashion) even in the more western languages, it should come as no surprise that it survived (somewhat more vigorously) also in the 'eastern' Sanskrit.

4.6.5: At the same time, however, there is ample evidence to show that, by (complete) extraposition, already PIE had acquired a preposed construction SAY (+ THUS) + DD. This is, especially in the 'western' languages, the type of construction which is most productive. However, also in the 'eastern' languages it is quite common. The reason for this is not difficult to find: Especially in the case of lengthy DD's, postpositive (THUS +) SAY would be considerably more awkward and taxing on the memory (especially that of the listener). (Note in this respect that otherwise overwhelmingly-SOV modern Indo-Aryan languages like Hindi, as well as literary (and colloquial) Persian, regularly have complete extraposition of ki (vel sim.) + DD.)

As a result of this complete extraposition, two major, competing patterns arose, one with preposed SAY, the other with postposed (or inserted) SAY. Such a situation often leads to specializations, and such a specialization is probably found in Homeric Greek, where postposed SAY, combined with hṓs 'thus', has a resumptive, discourse- or dialogue-concluding function, while preposed SAY (without hṓs) does not.

As it turns out, a similar pattern emerges for complete, 'normal' DD in Rig-Vedic Sanskrit. Of the verbal roots brū-, āh-, vac-, vad- (all meaning 'say, speak, etc.'), and prch- 'ask', 20 preposed occurrences are found without accompanying íti (vs. 5 or 6 with íti); on the other hand, 17 postposed occurrences are found with íti (vs. 3 without). (That is, the two patterns are more or less complementary.) In addition, there are two occurrences of 'inserted' SAY + íti and three without, as well as one instance of SAY + DD + íti + DD. (Here, the number of attestations is too small to suggest a definite pattern.) Finally, there are three (or four) examples of SAY + DD + íti.

It is possible to account for this situation by assuming that, as in Greek, THUS + SAY had a tendency to be specialized to postpositive position, while simple SAY tended to be preposed. However, unlike in Greek, this tendency was not carried to its logical conclusion, but--as often happens in 'analogical' generalizations--was counteracted by a tendency toward compromise, a 'blending' of the two competing patterns, resulting in preposed SAY, followed by DD, followed by postposed íti. (Similarly, the common Homeric formula SAY + DD + hṓs + SAY may be looked upon as a kind of compromise(-cum specialization).) This explanation of the Rig-Vedic facts would seem to better account for the pattern found in the Rig-Veda than Kuiper's hypothesis (which took into consideration only the occurrences of (SAY +) íti): Simple SAY is heavily favored in preposed position, íti + SAY in postposed position, while SAY + DD + íti still occurs only quite rarely.

This latter, compromise type of construction, however, may then have provided the nucleus for the reinterpretation of íti as a postposed quotative marker (no matter what the position of SAY). Whether this happened already in Rig-Vedic is difficult to decide merely on the basis of the evidence provided by the extant texts. The prevalence of the other two patterns, however, leads one to suspect that at this point the type SAY + DD + íti was still nothing but a compromise, rather than being felt as exemplifying an 'independent' quotative marker. At any rate, the fact that there are, according to my count, six instances of DD + íti without an overt occurrence of SAY is not necessarily evidence for íti as a quotative marker:[22] In three of these oc-

currences, SAY is clearly 'recoverable' or 'implied' (cf. 1:109:3 with SAY implied by nādh- 'flehen'; 10:115:9 with vac- 'say' in the preceding clause; 10:119:1 with man- 'think' in the preceding clause). And in three further instances (9:6:2, 10:71:1, 10:130:1) we are dealing with the common type of DD with omitted SAY exemplified by Germ. Und da kam er angerannt: 'Mutti, Mutti, ich habe gewonnen!' 'And he came running (with the words) "Mummie, Mummie, I won."' (Cf. Kieckers 1916:41-51 for similar examples of deleted SAY in Indo-European and other languages.) We may thus assume that in these cases, deletion operated on postposed SAY, leaving the accompanying iti stranded. (Cf. similarly, in indirect discourse, expressions like Germ. Dass er das gesagt hat! '(I can hardly believe) that he said that', with omitted 'believe' (vel sim.) and with the accompanying particle dass left stranded.) That Rig-Vedic had such a process of SAY-deletion is shown by the fact that there are also instances of DD without SAY and without iti (e.g. 7:99:3, 10:18:9, 10:23:2, 10:34:3), where SAY-deletion apparently applied to preposed (simple) SAY.[23]

4.6.6: While this alternative explanation of the Rig-Vedic occurrences of (SAY +) DD + iti--and of the, perhaps only post-Rig-Vedic, reinterpretation of the 'stranded' iti as a quotative marker--may not be as well supported by outside IE parallels as the postpositive occurrence of iti + SAY, it does not seem to be an unreasonable explanation. Moreover, there evidently is outside IE evidence for reinterpretations resulting in quotative markers, albeit not involving Th or Wh, but rather fossilized forms of SAY (cf. Hittite and Armenian). It is therefore by no means certain that the Sanskrit reinterpretation of iti as a quotative marker can be explained only by considering it substratum-induced.

In light of this possible alternative explanation, it must therefore be concluded that even for the second claim of Kuiper's hypothesis, (Dravidian) substratum influence cannot be considered established beyond a reasonable doubt.

4.7: Caste terminology and usage: While there can be no doubt that the elaborate caste system of later Indo-Aryan is an Indian innovation, it must be borne in mind that (a) as Emeneau himself admitted, the caste system and the corresponding special terminology and usage is not pan- or Proto-Dravidian, and that (b) while as Emeneau claims, there may have been pre-caste tribal Dravidian antecedents for these features, there are likewise pre-Indian Indo-European antecedents. The social stratification of Indo-European society into three layers--priests, warriors, and commoners--may have considerably differed in detail from the later Indo-Aryan caste system; but

after Dumézil's (1958) meticulous and extensive documentation, its existence in Proto-Indo-European times, as well as the association of special colors with these three layers, to the point that 'color' (Skt. varṇa-, Av. piśtra-) could in Indo-Iranian come to mean 'social class', can no longer be doubted.

Moreover, the practice of referring to married women by means of 'feminized' forms of their husbands' name or profession likewise has Indo-European antecedents and/or parallels. Cf. the archaic sets Lat. rēx : rēgīna, OIr. rí : rígain, Skt. rāṭ (or rājan-) : rājñī; Gk. pósis : pótnia, Skt. pati- : patnī-, Lith. viešpat(i)s : OLith. wieschpatni. In both of these sets, the feminine term may refer not just to a 'female ruler', but also--and in many societies perhaps more often--to the wife of the ruler. Cf. also Hom. Gk. basíleia, usually 'wife of a basileús "king"' (but ánassa, fem. of ánax 'king', means 'royal woman'). Compare also Germ. Bauer 'farmer' : Bäuerin, Bäcker 'baker' : Bäckerin (etc.), Doktor : Frau Doktor (etc.), Up. Frank. Kuno (proper name) : Kunera, where in traditional society, the feminine term usually refers to the wife of the person referred to by the masculine term. Finally, compare in the Rig-Veda agni- : agnāyī- 'Agni's wife', varuṇa- : varuṇānī- 'V's wife', etc., as well as nṛ- 'man' : nārī- 'wife' = Av. nar- 'man, warrior' : nāirī- 'woman, wife, married woman' (cf. nāirivant- 'having a wife'; the derivational vṛddhi of the feminine term clearly shows that this form is a feminine of appurtenance, defining the wife as belonging to the man).

In light of these Indo-European antecedents and/or parallels and of the uncertain evidence for pan- or Proto-Dravidian origin of the feature in question, it would seem well-advised to be cautious about attributing this feature to Dravidian influence.

5: CONCLUSIONS

5.1: The discussion in the two preceding sections has, I hope, shown that the hypothesis of Dravidian substratum influence on Sanskrit, especially on early Rig-Vedic, cannot be considered established beyond a reasonable doubt. The features of nominal style, participles as finite verbs, and distributive use of āmredita-compounds apparently are not considered probative any longer even by the advocates of the Dravidian substratum hypothesis--justifiably so, as the discussion in 4.1 has shown.

For the features of retroflexion, SOV, absolutives, and quotative, non-Dravidian alternative outside sources are (more or less) possible, with the latter three features so wide-spread in languages like Uralic (SOV, absolutives), Altaic (id.), Tibeto-Burman (absolutives, quotative), and Austro-Asiatic including Munda (quotative) that it would be extremely arbitrary to

single out Dravidian as the only possible source; cf. 3.6. Moreover, there is now some reason to doubt the claim that retroflexion is inherited in Dravidian and an innovation only in Indo-Aryan: The possibility (approaching probability) of Dravidian relationship to Uralic and Elamite suggests that retroflexion is an innovation of (Proto-)Dravidian; cf. 3.7.

On the other hand, there are solid Indo-European antecedents and/or parallels for the features of SOV (4.2), retroflexion (4.3), as well as for the (Rig-)Vedic uses of api (4.4) and of the absolutives (4.5), and probably also of the Rig-Vedic use (of not yet quotative) iti (4.6). (SOV and the absolutives may, however, be the result of areal influence on Proto-Indo-European; cf. 4.2.4 and 4.5.1.) There is thus no conclusive evidence for Dravidian influence on Rig-Vedic.

The case for post-(Rig-)Vedic Dravidian influence on Sanskrit is a little better. The special post-(Rig-)Vedic uses of api (2.2.5) and the absolutives (4.5.2), as well as the probably post-Rig-Vedic (4.6.5) development of iti into a genuine quotative marker might be considered evidence for Dravidian influence at that time, especially considering that all the uses of api are reconstructable for PDr. *-um (2.2.5) and that the features of absolutives and quotative are found in Uralic and Elamite respectively (3.6), making it possible that these features are even pre-Dravidian in origin. One might even be tempted to add the equally late feature of the special caste terminology and usage which however is not pan- or Proto-Dravidian (2.2.6, 4.7). However, even for these features it is possible to argue for native Indo-Aryan developments with at least some Indo-European antecedents and/or parallels (4.4; 4.6.6; 4.7) or, in the case of the absolutives, as part of a general, literary development away from verbal syntax and toward nominal syntax (4.5.2).

Perhaps the most important argument against a Dravidian origin of the features in question, especially in Rig-Vedic times, is the fact that there is not only no conclusive, independent evidence for early Dravidian/Indo-Aryan contact, but that on the contrary there is independent evidence for early contact between Indo-Aryan and another non-IE language (which is generally considered not to be a likely source for these features), namely Munda; cf. 3.1-3. This casts considerable doubt on the common assumption of early Dravidian/Indo-Aryan contact and the convergence it is generally as-

sumed to have entailed. (Even for later Sanskrit, contact--and thus possible convergence--with Dravidian may perhaps have been regionally limited; cf. 2.6 and 3.1.)

Finally, it is by no means certain whether Proto-Dravidian did in fact, as is generally assumed (at least implicitly), antedate the arrival of the Indo-Aryans: cf. 3.4.

5.2: While it thus unlikely that there was early convergence of Indo-Aryan with Dravidian, this should not be understood to imply that there is proof against such a convergence. I am not sure whether and how such a proof could be established--a common problem in arguing against substratum hypotheses. At the same time, however, the conclusions reached in this paper should encourage a search for alternative explanations.

Thus, the fact that many of the features investigated are found not only in the relatively 'central' Sanskrit (or Indo-Aryan), as well as in the Munda and Dravidian languages to the south, but also in some of the Tibeto-Burman languages to the north and east, in Burushaski to the north, and in the Eastern Iranian dialects to the northwest, combined with the sociolinguistically preeminent position traditionally enjoyed by Sanskrit in this area, may suggest that perhaps it was the geographically and sociolinguistically central Sanskrit which furnished the starting point, and the impetus, for the spread of many, if not most, of these features. There is, in fact, growing evidence for Sanskrit influence on the vocabulary of Dravidian; cf. Emeneau & Burrow 1962, Burrow & Emeneau 1968:167. However, considerably more work will have to be done in this area before even half-way acceptable conclusions can be reached.

5.3: In the meantime, there is at least some reason to be cautious also in respect to this alternative view. For as noted in 3.8 above, the distributional patterns of Dravidian and (Old) Indo-Aryan retroflexion are quite different, and this discrepancy does not seem to be well accounted for by a theory postulating convergence--in either direction. It may therefore well be that retroflexion is native both to Dravidian and to Indo-Aryan; and this should perhaps no longer come as a surprise, considering how common and phonetically well-motivated this feature is; cf. 4.3.6.

It is interesting to note that the modern geographical distribution of retroflex segments in the South Asian sprachbund may well be interpreted to support this view: As map 3 (p. 555) of Ramanujan & Masica 1969 shows, the extreme northwest (including Pashto, Burushaski, and Shina) is the only area with distinctively retroflex sibilants (and, except for Pashto, with distinctively retroflex assibilated stops). At the same time, the extreme south (including Tamil and Malayalam) is the only area with retroflex continuant r̲. In addition, the 'richest' retroflex systems are located, again, in the extreme northwest and in the extreme south. Considering that retroflex s̲ was the starting point for (Old) Indo-Aryan retroflexion and that the extreme northwest was the most original South-Asian home of (Rig-Vedic) Sans-

krit, while ṛ is the most distinctively 'Dravidian' retroflex segment and the south may have been the most original home of the Dravidians in South Asia (cf. 3.2), it might be argued that these extreme northwestern and southern homelands have most faithfully preserved the original, native patterns of retroflexion, while the vast intermediate territory constitutes the main area of convergence, where the 'peculiarities' of the two different systems were 'leveled out' (but where the two general patterns spread, presumably in large measure at the expense of the very different pattern of Munda).

It would be interesting to see to what degree this pattern agrees with the distributional patterns of the other features investigated in this paper, as well as with (linguistic and nonlinguistic) historical and prehistoric evidence.

5.4: In the absence of such further investigations, however, it seems preferable to admit that the evidence now available is insufficient either to establish beyond a reasonable doubt that the South Asian convergence began as early as (Rig-Vedic) Sanskrit times or to decide whether the convergence began unidirectionally (with only Indo-Aryan influenced by Dravidian) or if, from its inception, it followed the mutual-influence pattern generally observed in present-day India.

FOOTNOTES

[1]Research on this paper has in part been supported by 1974/75 and 1975/76 grants from the University of Illinois Research Board and by a 1974/75 grant from the American Philosophical Society.-- Earlier versions of this paper were read at the 1974 Meeting of the Mid-America Linguistics Conference (Lincoln, Nebraska, Oct. 19, 1974) and before the South Asian Language Analysis Group, Department of Linguistics, University of Illinois (Nov. 11, 1974). I have benefited from helpful comments and criticisms by Jürgen Döllein, Geoffrey Huntsman, Braj B. Kachru, Alan S. Kaye, S. N. Sridhar, Syed M. Syeed, Sarah G. Thomason, and Dieter Wanner. I am grateful also to Paul Friedrich for making available to me a prepublication copy of his paper 'The devil's case: PIE as SVO.' Needless to say, my indebtedness to these friends and colleagues should not be taken to imply that they would all agree with every one of the claims made in this paper.

[2]However, on p. 175 he cited Middle Indo-Aryan as a possible source for some of the unexpected Sanskrit retroflex consonants.

[3]Assuming that Bhili (or Nahali), found in relic areas of the northwest part of the Central Mountains, which unlike Dravidian or Munda has initial retroflex stops, is a language isolate, Wüst (1957) tried to account for (post-RV) words with initial retroflex stops, such as ṭhakkura-, as borrowings from Bhili. However, his etymologies (cf. Skt. ṭhakkura- 'divinity, numen' = differently nativized śakvara- 'bull') are far from convincing. Moreover, the exact linguistic affiliation or non-affiliation of Nahali is still a matter of controversy; cf. Zide 1969:427-8, Kuiper 1972:292-3.

[4]Konow (1903:456) also considered the generally observed increase of l-forms (at the expense of forms with r) to be induced by the Dravidian substratum. However, in this view he seems to have remained alone. In addition, this phenomenon seems to be more plausibly attributed to dialect mixture in Indo-Aryan; cf. Hock & Pandharipande To Appear:§3.1.2.

[5]Emeneau (1954:291-2), to be sure, questioned the validity of many proposed etymologies, since the evidence for Munda origin often did not come directly from Munda, but from (other) Austro-Asiatic languages. In Emeneau's view, the relationship between Munda and Austro-Asiatic had not been established. However, Pinnow's work (cf. e.g. 1959 and 1960) should have laid to rest Emeneau's reservation.

[6]Recent discussions, however, seem to follow Kuiper 1967a in considering all retroflexion due to convergence.

[7]Erlier publications frequently add uloká- 'world' (RV passim). However, since Leumann's convincing demonstration that this word must be the dissimilated outcome of uru- or ulu-loká- (containing uru- 'broad, wide'), it must be omitted from the list of possible Dravidian borrowings.

[8]On this matter, cf. Hock & Pandharipande To Appear:§3.1.2-3.

[9]Note that, directly or indirectly, the nasal-prefix form of the Munda word for 'plough' found its way also into some Dravidian languages; cf. Tam. ña-ñ-cil, Kann. nē-gal.

[9a]As for late Vedic and Classical ghoṭa(-ka)- 'horse', first appearing in the southern Āpastamba Śrautasūtra--an alleged Dravidianism which remained in Modern Indo-Aryan (cf. Hindi ghoṛā)--, Bloch (1929:736) wondered how a "Dravidian" borrowing can have a voiced aspirate. Moreover, he pointed out, 'Horse-breeding is certainly not a peculiarity of the Deccan.' On the other hand, there is a word ḫtr 'team, horse' in Egyptian, where the art of horse breeding was known. Also Turkish and Modern Greek have possible cognates. There is thus ample reason to doubt a Dravidian, or even an Indian, origin for this word.

[10]Emeneau (ibid.70, fn. 10), while preferring to consider Brahui an isolated relic area, does admit the possibilty that further work may show the language to have migrated from a more southerly position.

[11]Pizzagalli's (1929:165-7) argument for Munda origin of this feature, though based on a correct interpretation of the linguistic-geographical evidence, can therefore not be accepted.

[12]Cf. for instance the mistakes made by many English speakers learning a South Asian language.-- The phenomenon under discussion should not be confused with the difficulties which arise in the nativization of, say, English words into Hindi, where the usual substitution for the English alveolar stops is that of Hindi retroflex stops, but where as a result of the incommensurate nature of the two obstruent systems, there may be an occasional vacillation in favor of Hindi dentals (cf. moṭar 'motor car' etc. vs. botal 'bottle'): Unlike English, which has alveolars (i.e. neither pure dentals nor retroflexes), Indo-Aryan had dental (or dantamūla- 'tooth-root'-articulated) stops.

[13]For examples of retroflexion in East Iranian dialects, cf. Konow 1932: 8-11,34, and passim, 1949:14,18,25; Morgenstierne 1958:159. For absolutives, cf. Konow 1932:59, Bailey 1958:147,149.

[14]McAlpin (1975:114) is sceptical about the cogency of Tyler's claims. However, referring to later literature which is not available to me, he states that there now is, also to his mind, evidence for the Uralo-Dravidian connection.

[15]Krishnamurti, to be sure, has proposed to consider what in Dravidian linguistics normally is written r to be an original z. However, as he himself admitted (1969:318, fn.18), there is no strong empirical evidence in favor of this proposal.

[16]Another difficulty with the usual explanation of the Sanskrit retroflex/dental contrast is that Dravidian has a retroflex/alveolar/dental contrast. Why, one may wonder, did Sanskrit in that case not adopt the entire triple contrast, rather than limit itself to the retroflex/dental subset?

[18]It should be noted that Friedrich (In Press) does make occasional references to PIE VSO as the 'angel's case'.

[18a]I happen to be a native speaker of a clearly retroflex idiolect.

[19]In addition, note Thieme 1942:192-3 and Wackernagel 1942:161 for explanations of some of the instances of "spontaneous" retroflexion.

[20]This is not to say that the 'Romance' retroflexion has not been attributed to substratum influence, in the belief that it is "un-Indo-European". However, already Millardet (1933) recognized that no known language could be identified as identical or related to that substratum. His conclusion that nevertheless there was an (unknown) substratum, s 'substratum X', is interesting only to the extent that it shows the extremes to which substratist "explanations" can go. Contrast this with Rohlfs's (1970) sober conclusion that there is no evidence, or need, for a substratum.

[21]Also Avestan has been believed to have absolutives (in -am, -tīm); cf. e.g. Reichelt 1909:335-7. However, Benveniste (1930) has expressed considerable doubts concerning the absolutive interpretation of these forms.

[22]Two further apparent instances of DD + iti (without SAY), namely RV 1:191:1 and 5:52:11 are to my mind too uncertain or unusual to be included as evidence. In 1:191:1, iti follows after each of two apparently conjoined words (dvāv íti plúṣī íti). A quotative iti should follow the entire DD. Are we here dealing with deictic iti, used as an emphasizer (i.e. 'two (sic) pluṣis (sic)') ? As for 5:52:11, Geldner (1951:ad loc.) states that 'Manches ist dunkel' in this verse.

[23]There are finally, for the verbs examined, also three instances of 'mixed' syntax, with Acc. + DD (+ iti) + SAY (etc.) instead of Acc. + Acc. (+ iti) + SAY (as if, in English, one were to say They call him 'Thief' instead of They call him a thief). In these mixed constructions, we find one occurrence each of Acc. + "DD" + iti + SAY (8:92:2), Acc. + SAY + "DD" + iti (9:114:1), and "DD" + iti + SAY + Acc. (5:61:8; passive, hence Acc. → Nom.). In addition, there are four other 'mixed' constructions in which Acc. + SAY is followed by a more genuine DD (as if E They say him 'He is a thief'),

namely Acc. + SAY + DD (4:38:9c,d), Acc. + SAY + "DD" + DD + iti (1:164:15a, b), Acc. + SAY + DD + iti (2:12:5a,b (2x)). These 'mixed' types are too sparsely attested to suggest a definite pattern and explanation. However, it may be argued that the occurrence of iti with all three instances of "DD" results from the fact that the non-occurrence of iti would lead to opaque surface constructions of the type Acc. + Nom. + SAY which would be apparent counterexamples to the rule(s) producing normal Acc. + Acc. + SAY.

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